

## MAJOR REPAIRS MADE IN EDISON CO. SHOPS

(Concluded from Page 1, Column 2)  
trouble, the service man goes out and installs another assembly from stock, bringing back the defective unit for re-conditioning in the service shop.

A stock of approximately \$80,000 is maintained in refrigeration parts alone, Mr. Dick says. When a defective piece of equipment is brought in, it is stocked for re-conditioning.

When enough of one type of major assembly has accumulated to warrant production methods in re-conditioning, a job lot of them is run through the shop, defective parts replaced, the necessary machining done, assemblies tested, and then placed on the stock shelves for the call of the field service men.

Fifteen service cars cover the city in refrigeration service, each car being equipped with some \$600 worth of parts. Eight of the cars are for Kelvinator service only, while seven carry parts and men experienced to service both Kelvinators and the Servel machines sold by the company when it was a Servel distributor, 1923 to 1929.

### Service Men Phone Four Times a Day

Each service man phones in to headquarters at 10 in the morning, noon, and 2 and 4 o'clock in the afternoon for instructions on calls in his territory.

By limiting field work to replacement of major assemblies and minor adjustments such as valve adjustments, belt replacements, and the addition or removal of refrigerant, Mr. Dick knows when his men are putting in full time on the job, by comparison of their reports with the time allowances for the various operations.

A field service man is required to fill out a report (sample shown in adjoining columns) showing the exact condition of the equipment serviced, what temperatures were being held, what was done to the machine, how much time it took, and various other information about the call.

### Stresses Float Valve Calibration

Mr. Dick believes that the secret of good operation of apartment house installations is proper calibration of float valves and the right amount of oil in the system. Hence, he has instructed his service men about the exact amount of oil to be maintained in each of the various equipments.

And all float valves are tested in a special fixture consisting of an open vessel in which liquid supports the float of the valve under test. If the valve doesn't maintain the liquid level in the vessel that it should, the adjustment is made. The floats are wired to the valves in such a way that they cannot be bent out of adjustment, and stored.

Re-conditioned compressors are run in with oil-pumped nitrogen gas, and must pump up predetermined pressures before they are approved for stock. Kelvinator compressors are tested with 50 lbs. of nitrogen pressure under water, while Servel compressors get 100 lbs. of the same gas. Mr. Dick prefers nitrogen for these tests because it is anhydrous, easy to handle, has no obnoxious fumes, and doesn't pick up moisture, he says.

### Use Iron Pipe Coils Considerably

Iron pipe cooling coils are used quite extensively by the company in commercial installations. To dry them, Edison workmen heat the coils to a 300° F. temperature in transformer ovens, then blow them out thoroughly with 100 lbs. of carbon dioxide gas pressure.

When a thermostat develops trouble in a customer's home, and the service man replaces it, the defective thermostat is tested in special refrigerators and its action observed and recorded by Bristol recording thermometers. The chart is given to the service man to check his analysis of the service call.

Periodical checking of all refrigerators installed by the company was carried on for some time, but two years ago these monthly inspections were given up because it was uneconomical and unnecessary, according to Mr. Wetherbee. In some cases it was actually harmful, he believes, in leading the customer to expect trouble from refrigerators. Now this service is provided only if the customer asks for it.

## To Keep Accurate Service Records

NAME G REIS  
 ADDRESS 7600 GREENVIEW  
 LOCATION OF BOX OR UNIT KITCHEN  
 TYPE OF UNIT AA NO. & TYPE LOWSIDES 273 Bx  
 HEAD PRESSURE FOUND 80 LEFT 80  
 SUCTION PRESSURE FOUND 6 inch LEFT same  
 EX. VALVE SETTING FOUND LEFT  
 WATER TEMP. IN 0 OUT 0 DRAIN SIZE       
 SO2 ADDED      LBS. OIL LEVEL       
 SO2 REMOVED      LBS. OIL ADDED      PINTS  
 UNIT COMPARTMENT TEMP. 93  
 ROOM " 90  
 BOX " 44  
 CORE " 18  
 IS FAN BLOWING? yes FILTER no  
 RUNNING TIME       
 IDLING TIME       
 WATER VALVE AT      SEALED       
 PRESSURE CONTROL      SEALED       
 TYPE OF STARTER      SO2 LEVEL       
 CLEANED CONDENSER yes LABOR HRS. 1/2  
 OIL FITTING      AIR CIRCULATION 4 inch  
 REMARKS OK on arrival  
 SIGNATURE Blanagan  
 DATE 7-17-31

Commonwealth Edison service men record the exact condition of each installation attended by filling in one of these charts. The blank "Is Fan Blowing?" indicates whether the fan is blowing or sucking.

## G. E. UNIT COOLS RIVETS IN AVIATION MANUFACTURE

HARTFORD, Conn.—Mechanical refrigeration is playing an important role in the manufacture of airplanes at the Chance Vought Corp.'s plant in East Hartford. A General Electric water cooler, installed by the Newton-Parsons Co., of 123 Ann St., is being used for storage of duralumin rivets in the period intervening between their manufacture and their actual use in assembling planes.

The water cooler, with bottle removed and an insulated cover substituted, was installed on an experimental basis, and thus far is reported to have served its purpose well. Six trays, cut like slices of pie and placed in a circle over the coils, contain the rivets. Workmen may remove one tray at a time, as they need the rivets.

Refrigeration of the rivets is necessary, due to the nature of duralumin. Rivets made of this material must be kept in a low temperature until ready for use, or they will change in consistency and diameter so that they are not suitable for the exact work, such as is

## Metal Stampings Unit Bases and Guards

Household Refrigerator Metal Panels—Exterior or Inside Panels and Food Compartments.  
 Louvered Panels—Special Trays or Panels—Water Cooler Panels.

MOTORS METAL MFG. CO.  
 5936 MILFORD AVE. DETROIT, MICH.

## REFRIGERATION GASES

AMMONIA  
 BUTANE  
 CARBON DIOXIDE  
 ETHYL CHLORIDE  
 ISOBUTANE  
 METHYL CHLORIDE  
 SULPHUR DIOXIDE

One Pound to Carload Lots

We refill your cylinders or supply new cylinders

30 DIFFERENT Compressed Gases

VALVES, CONTROLS and EQUIPMENT

Write for price list and catalog

The Matheson Co., Inc., East Rutherford, N.J.

## LITERATURE OF MANUFACTURERS

Catalogues, bulletins and other material recently issued.

Manufacturers are requested to send copies of new trade literature to Electric Refrigeration News.

### Wagner Motor Bearings

"Steel-Backed Babbitt-Lined Bearings" is the title of a new bulletin just issued by the Wagner Electric Corp., St. Louis. It is known as Wagner bulletin S-349, and discusses the problem of bearing seizure in electric motors, the characteristics of babbitt bearings, and specifically the use of these bearings in electric motors.

### Ideal Motors

The Ideal Electric & Mfg. Co., of Mansfield, Ohio, has issued a new 16-page bulletin No. 520 on synchronous motors. Descriptive matter, application data, and dimension charts are presented, covering the flywheel type of synchronous motors, and six other standard types. A feature of the bulletin is its method of showing dimensions of any motor in any horsepower or speed rating.

### Beaver Pipe Tools

The Borden Co. of Warren, Ohio, manufacturer of Beaver pipe tools, is distributing a series of blotters stamped with a five-color reproduction of one of the five different display boards used by company jobbers in acquainting the public with the Beaver line of die stocks and pipe cutters. Above the tool illustrations is the Beaver trademark.

### Small Westinghouse Generators

A new 12-page pamphlet known as circular 1908 of the Westinghouse Electric & Mfg. Co. describes the four different types of generators offered for use where a small amount of electrical energy is necessary, but where no central station supply is available. The four kinds are: belt-driven generators, turbine-generator units, portable gas engine driven power units, and electric service plants.

### Restaurant Equipment

Restaurant and soda fountain equipment employing refrigeration is shown

## FILTRINE FILTERS for ELECTRIC WATER COOLERS

GUARANTEED  
 FILTRINE MFG. CO.  
 49 Lexington Ave. - Brooklyn, N. Y.  
 Manufacturers of filters and coolers in all sizes.

## Rice Refrigerant Dryer-Filter

Reduces Time - Worry - Costs

THIS is a time when increased attention is being given everywhere to more economical and dependable methods of servicing refrigerating equipment.

You can cut your service costs materially by using RICE DRYER-FILTERS:

1st—Before starting up any new installation; or

2nd—When adding refrigerant to a system; or

3rd—Whenever moisture or dirt is present or suspected in a system.

This practice will save endless service and expense.

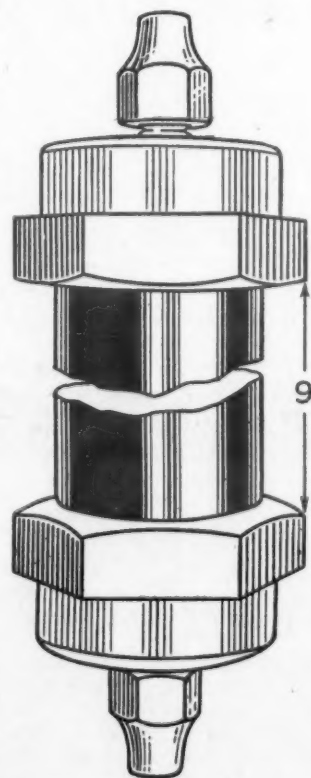
### Superior Features of Rice Dryer-Filter:

It is easily made tight without the use of any sealing compound.

It is easily opened for examination or for refilling.

It can be easily and repeatedly refilled without injury or wear.

It will give years of satisfactory service.



For use with Methyl Chloride, F-12, SO2, Iso-Butane, Frezcol, Ethyl-Chloride, or other refrigerants.

Write for descriptive folder

C. E. RICE COMPANY

329 Dwight St.

Springfield, Mass.

in catalog No. 12 of the Acorn Opalite Metal Specialties Co., Inc., of Chicago. Floor and counter coolers, ice cream cabinets, display cases, soda fountains, water coolers, and various combinations of them are illustrated in this 72-page booklet.

## Specialized FORGINGS

for every Electrical REFRIGERATION NEED

DETROIT FORGING

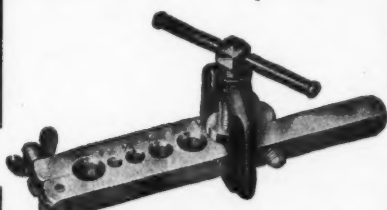
Company Michigan  
 Member of Detroit Business Pioneers

## Quicker Better INSTALLATIONS



### Imperial Tube Cutter

A highly efficient tool for cutting copper, brass, block tin and lead tubing. Takes all sizes of tubing from 1/8" to 1/2" and makes a right-angle cut, quickly and cleanly, leaving no burrs or chips to clog the line. Tubing does not become out of round as when put in a vise. Cuts tubing in half the time required by old methods. No. 94-F Tube Cutter, each \$2.50



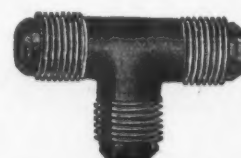
### Imperial Flaring Tool

Makes a perfect flare and taper to tubing needed for making up tight joints. Does the work in least time. Simple to operate. No loose dies—no vise necessary. No. 93-F takes tubing sizes 3/16", 1/4", 5/16", 3/8", 7/16" and 1/2", each \$3.00  
 No. 95-F takes tubing sizes 1/4", 5/16", 3/8", 1/2" and 5/8", each \$4.00



### Imperial Tube Bender

Tubing can be quickly bent into desired shape by hand when Tube Bender is slipped over tubing. Set of seven benders furnished for 1/4", 5/16", 3/8", 7/16", 1/2", and 5/8" tubing sizes. Price complete set, \$2.75  
 No. 101-F.....



### Imperial Brass Forgings

Accurately made to meet requirements of Iceless Refrigerator Manufacturers. Will not leak. Let us quote on your requirements.

### New Free Catalog

The new Imperial Catalog illustrates and describes the complete Imperial Line of Brass Forgings, Valves, Manifolds, Tools, etc. Send for this free catalog today.

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 BRASS MFG. CO.  
 565 South Racine Ave.  
 CHICAGO, ILL.



# ELECTRIC REFRIGERATION NEWS

Registered U. S. Patent Office.

The business newspaper of the refrigeration industry

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## NORGE CONTEST QUOTA BOOSTED FOR THIRD TIME

New York, Jacksonville,  
Cleveland Lead in  
Race for Trophy

DETROIT—As the three months' period nears its end, 7,100 Norge distributors and dealers registered in the campaign are driving through to reach the quota of the Marathon Rollover sales contest. The quota has been re-set three times since the contest started, so that it is now double the original figure, according to Jack Frolich, contest manager.

The sales to Aug. 12 had exceeded 60 per cent of this altered quota, Mr. Frolich states.

The World Utilities Co. of New York, the firm of Strong, Carlisle & Hammond at Cleveland, and the French-Neston Co. at Jacksonville, Fla., are the distributorships leading in the race for the Howard E. Blood trophy-cup.

The campaign has succeeded in keeping down the percentage of decrease from the peak months of May and June, one of the aims of the contest set out by Howard E. Blood, Norge president. The decrease with respect to June sales was only 9 per cent during July, as compared with the usual fall of 25 to 30 per cent, according to Mr. Frolich.

Early reports on August sales indicate that the volume will parallel that of July and that the percentage of fall-off in sales will be the lowest in history. August production schedules are failing to keep up with the demand, the contest manager declares.

July sales by Norge dealers in Chicago were 41 per cent over the June figures, while Milwaukee July sales showed a similar increase of 26 per cent, according to figures received here.

The Philadelphia area, with nearly 800 names registered on the contestant list, is leading in the number of entrants. After his first three sales in the contest period, the salesman is entitled to one of the prizes listed in the catalog. (Concluded on Page 2, Column 5)

## KELVINATOR HORSES SET FOR FINAL STRETCH DRIVE

DETROIT — Kelvinator distributors and dealers are grooming their sales organizations for the final stretch drive in the Kelvinator derby which will end Sept. 15, just three weeks away.

The horses are now running on the sixth furlong, with two more to go before crossing the finish line.

Mobile, Ala., running at Washington Park, and Syracuse, N. Y., entered at Churchill Downs, were the most consistent racers in the first half of the eight furlong race. These horses won each of the four furlongs.

After starting in second place, Pitts- (Concluded on Page 2, Column 5)

## GRIGSBY-GRUNOW PLANS FALL SALES CAMPAIGN

CHICAGO—Plans are under way for an early fall sales campaign for Majestic refrigerators, according to R. S. Brunhouse, assistant sales manager in charge of the refrigeration division.

No details of the campaign have been released as yet, Mr. Brunhouse stated, although it is expected that the promotional work will be in full swing by the latter part of September.

## REX COLE CLOSES CONTRACTS FOR 1,300 UNITS

NEW YORK—Three contracts calling for the installation of 1,300 General Electric refrigerators in 25 Manhattan apartment buildings were closed recently by the apartment sales division of Rex Cole, Inc., distributor.

An order for 400 machines was received from the Tishman Realty and Construction Co. The order was secured by John H. Massimi, division head.

Henry Miserocchi closed the contract for the installation of 105 units in two buildings owned by the Empire Mortgage Co., while H. G. Bancroft received the order for 800 machines from Borchard Affiliations for 16 Manhattan buildings.

## Manager



H. C. MEALEY  
Manager of Camp Refrigeration V.

## NEW YORKER LEADS WESTINGHOUSE DRIVE

MANSFIELD, Ohio.—Setting the pace for the first two weeks of the Westinghouse "build-a-refrigerator" sales contest, R. N. Snyder of the E. A. Maher Co., Hempstead, N. Y., closed orders for 22 refrigerators and as a result has two phantom refrigerators marked up to his credit.

The two-months contest inaugurated Aug. 1, places the salesmen in the role of builders, each sale entitling the builder to make an addition to an imaginary refrigerator. For each sale a number of discs, or points are allowed, which are credited for parts used in the 11 steps required in "building a refrigerator."

Edward Wroblos of the Dalrymple (Concluded on Page 2, Column 5)

## COPELAND SALES IN JULY INCREASE 84% OVER 1930

MT. CLEMENS, Mich.—Copeland Products, Inc., manufacturer of household and commercial refrigerating apparatus, reports increase in unit shipments for July, 1931, of 84.56 per cent over July, 1930, according to Louis Ruthenburg, president.

Orders received during the month of July, 1931, were 155.89 per cent above orders booked in July, 1930.

## G. E. Distributors at Island Start Drive for Fall Sales

### Big Prizes Offered To Election Contest Winners

CLEVELAND—"Every G. E. man a politician," was the battle-cry of the chiefs of the General Electric refrigeration department upon their return from the Camp Refrigeration pow-wow held at Association Island last week.

Between Sept. 14 and Nov. 21 every man in the G. E. sales organization will be running for an office—to be elected by the number of votes they can accumulate through the sales of General Electric refrigerators.

Sixty-two distributors will be candidates for the "Presidency of Refrigeration" and for the cabinet portfolios. The one elected president will receive a Chrysler Imperial convertible roadster and a scroll for achievement from Owen D. Young, chairman of the board of an increased production schedule. from Gerard Swope, president of the company.

The next six highest distributors in the campaign will receive positions in Refrigeration's cabinet and will get special Ford pick-up trucks for delivery of refrigerators.

Sales managers in each distributor- (Concluded on Page 2, Column 4)

## Politician



A. C. MAYER  
Director of G. E. Political Campaign

## FRIGIDAIRE FACTORY VACATION SHORTENED

DAYTON, Ohio.—The annual vacation period for Frigidaire factory workers has been shortened to meet exigencies of an increased production schedule.

The usual vacation period was scheduled to start Aug. 22 and run until Sept. 8. However, production tracks in both plants are still in operation and will probably not be stopped until Aug. 29, according to E. R. Godfrey, vice president in charge of production.

The August manufacturing schedule of household Frigidaires was increased three times to keep pace with sales. As finally revised it was double that of August, 1930. Last week the original September production of household Frigidaires was increased 20 per cent.

Results of the Jubilee campaign will be celebrated by dealers and salesmen of the organization in meetings to be held in 44 key cities throughout the United States during the next two weeks. At the same time the organization program for the last four months of the year will be presented.

## Autumn Plans Produced In Conferences At Camp

By George F. Taubeneck

ASSOCIATION ISLAND, N. Y.—Under the shade of the historic old elm tree here, a new republic was born last week. Its name is RefriGerania, and it has a flag, 61 states, a chief justice and an associate justice, and soon will have a president, vice president, cabinet, congressmen, governors, and mayors.

Citizenship papers were taken out by some 216 General Electric refrigerator distributors and their junior executives, Cleveland headquarters men, and engineers from Schenectady, Erie, and Fort Wayne, all of whom were here Aug. 19, 20, 21, and 22 to attend Camp Refrigeration V.

No declaration of independence was signed, no articles of confederation were drawn up, no constitution was adopted. But the citizens of the new American republic dedicated themselves to the task of building fall sales and demonstrating the falsity of the notion that electric refrigerators can't be sold when the thermometer drops.

This political sales campaign, details of which are explained in the story beginning in column three of this page, was the theme of the annual convocation of distributors of G. E. refrigerators with the executive staff from Cleveland.

Every morning was held a general business session. In these general sessions, members of the Cleveland headquarters staff and chairmen of distributor's committees presented ideas and discussed ways and means of increasing fall sales.

"Let next year take care of itself," was the story. "Our job right now is to sell refrigerators throughout the remainder of this year."

Afternoons were occupied by specialized and departmental group discussions—sessions which began soon after lunch and often lasted until the foot- (Concluded on Page 4, Column 1)

## GRAND RAPIDS CONCERN CLOSES TWO CONTRACTS

GRAND RAPIDS, Mich.—Low temperature display cases made by the refrigeration division of Grand Rapids Store Equipment Co., 1545 Madison, S. E., will be sold by the regular distributing organizations of Kelvinator and Copeland corporations according to an arrangement just made public by M. C. Burnside, manager of the refrigeration division.

The Grand Rapids line includes Zeromatic 3½ and 5 ft. display cases in white porcelain and green lacquer for packaged ice cream and frozen fruit juices, and 8, 10, 12, and 14 ft. low temperature cases in white porcelain, porcelain tile, and moderne design for quick-frozen foods. Also the Chillomatic line (Concluded on Page 2, Column 4)

## BOHN OPENS NEW STORES IN THREE LARGE CENTERS

ST. PAUL, Minn.—New stores have recently been opened by Bohn Refrigerator Co. in New York, Chicago, and Minneapolis. The New York store was moved from 5 E. 46th St. where it was located for many years, to 66 W. 45th St. The new Chicago store is on Lake St. just off of Michigan Ave.

Refrigerators are moving especially well in New York City, according to R. G. McCord, sales manager. Forty-six were sold in the New York store on Saturday, Aug. 15.

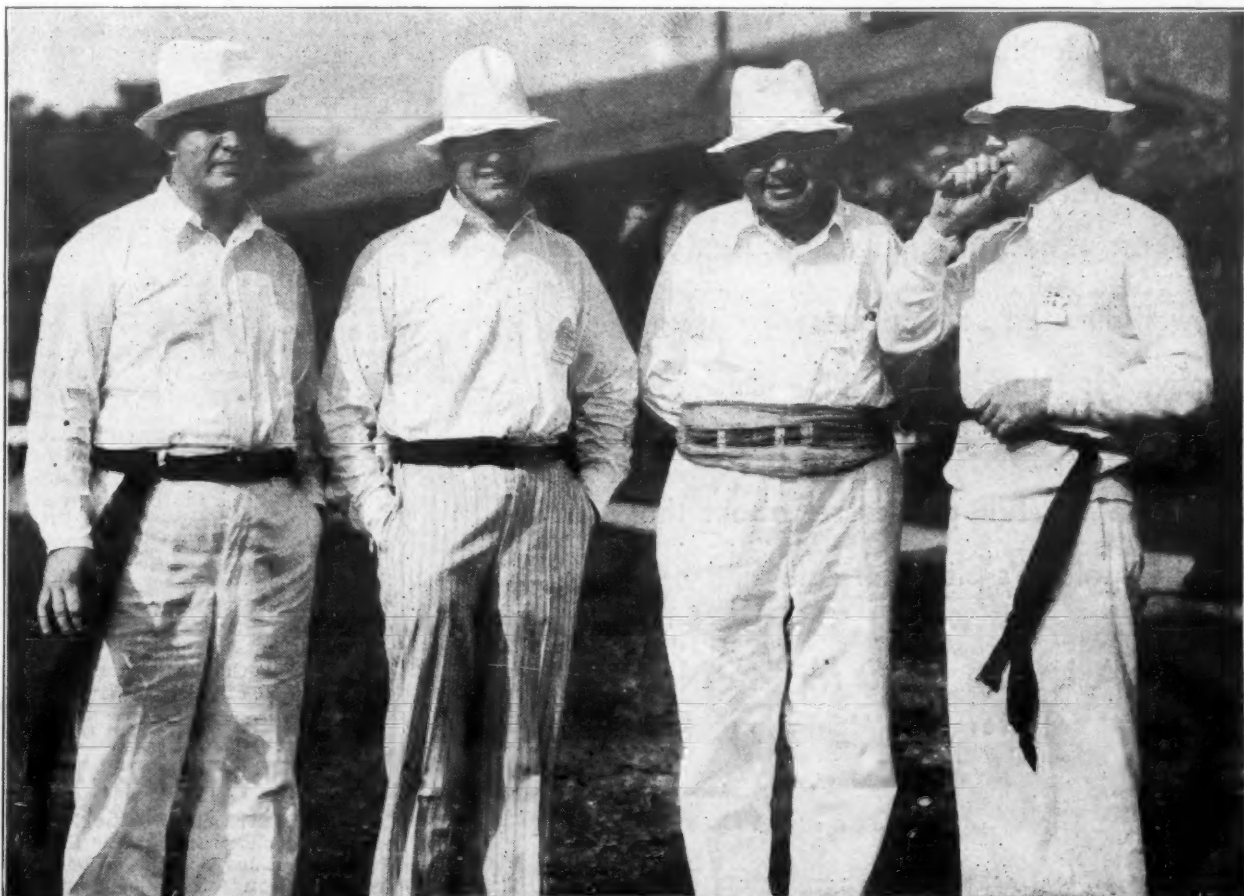
The Aeolian Co. in St. Louis has just been appointed Bohn distributor for the state of Missouri.

## PENDERGRAPH LEAVES UTILITY TO BECOME DISTRIBUTOR

ATLANTA, Ga.—H. A. Pendergraph, merchandising manager of the Georgia Power Co., will leave the employ of that utility Sept. 1 to become distributor for G. E. refrigerators in the state of Tennessee.

Accompanying Mr. Pendergraph in the move will be Carl Brown, his first assistant.

## Leading Citizens of RefriGerania



Lou Maxon, P. B. Zimmerman, Chris Steenstrup, and T. K. Quinn (in that order), get together at Association Island meeting of G. E. distributors.

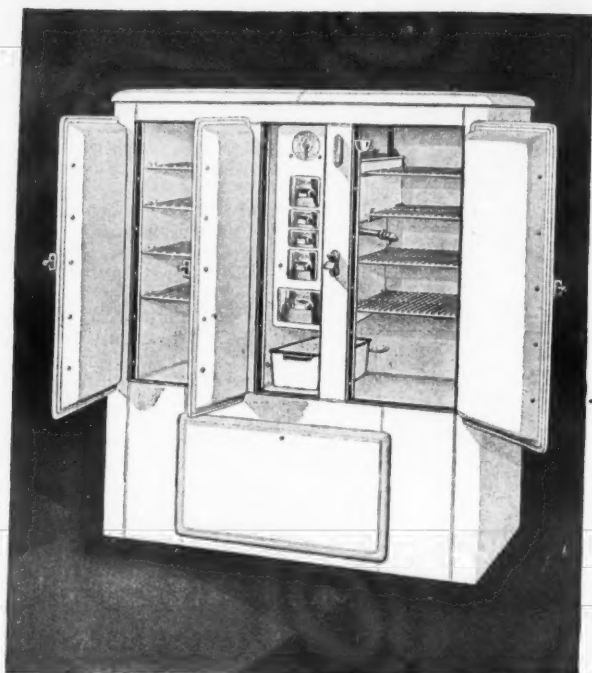
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LIBRARY  
BRANCH OF THE  
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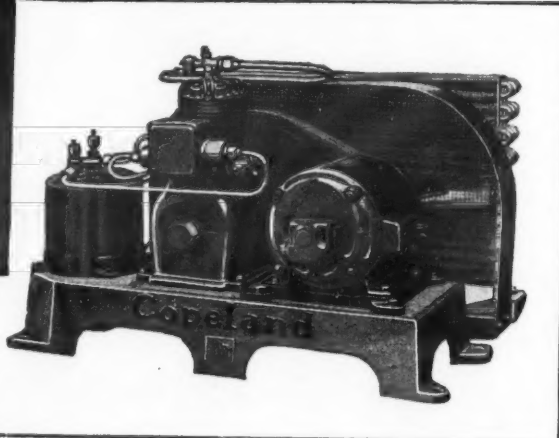
# COPELAND

DEPENDABLE ELECTRIC REFRIGERATION



Model E-152, one of the larger models of the comprehensive Copeland Domestic Line.

Copeland Model XA-1200B, one of the widely used Commercial Units.



## RECORD SALES CONTINUE!

Sales of Copeland Electric Refrigeration, both in the domestic and commercial fields, still continue at a record pace. Unit shipments for July, 1931, exceeded July, 1930, by 84.56 per cent. Orders received in July this year were 155.89 per cent greater than those of July a year ago. August shipments to date point to another record month.

There are real reasons for Copeland's continued success—the electric refrigeration market is responsive and the Copeland line has established a quality reputation on all counts. Persistent, well-directed sales efforts are bringing rewards to aggressive Copeland merchants—and will continue to do so throughout the year. Why not tie-in with Copeland progress? Write for full particulars about the Copeland franchise and Copeland's plans for Fall.

**COPELAND SALES COMPANY**

332 Cass Avenue, Mount Clemens, Michigan

FOR THOSE WHO WANT THE FINEST

### G. E. Distributors Seek Presidency

(Concluded from Page 1, Column 3) ship will fight it out for governor, each winner to receive a cash award of \$150. The winning branch manager, wholesale or retail supervisor in each distributorship will be named lieutenant-governor, and will receive \$75.

Senatorial positions will go to the utility man who is victorious in each distributorship. The awards to the Senators will be gold-plated engraved fountain pen desk sets.

Congressmen will be the winning dealers from each distributorship. They will be awarded a silver-plated and engraved fountain pen desk set.

Every salesman, whether retail, commercial, apartment house, central station or dealer salesman, qualifies as a candidate for mayor. One mayor will be elected for each of the 62 distributors' main cities. The winning candidate will receive a gold-plated safety razor set, while every salesman will win prizes based on his actual sales.

The candidates elected will have positions in the mythical country of Refrigerania—with its "capital" at Cleveland and its boundaries and political structure the same as those which govern the sales structure of the General Electric refrigeration department organization. The seven main political districts will correspond with the seven general sales districts, and the 62 states with the 62 different distributorships.

P. B. Zimmerman, G. E. refrigeration department general manager, will act as Chief Justice of Refrigerania during the elections, and will be assisted by George C. Chapman, assistant manager, as Associate Justice. They will check and count the ballots which will be marked by the salesmen who will receive one ballot for every refrigerator sold.

### FURNITURE ASSOCIATION FIGHTS UTILITY SELLING

DALLAS, Tex.—The recent announced intention of the Dallas Gas Co. to enter the retail field with a line of gas appliances has brought to a climax the fight by local dealers against utilities merchandising gas and electric appliances.

At a meeting Tuesday, Aug. 15, of local furniture men, plans for a fight on the local gas company were completed, according to statement from Louis F. Rick, president of the Retail Furniture Merchants association.

The local fight is part of a state-wide movement to limit utilities to the exclusive manufacture and distribution of power and fuel and to keep them out of the retail field and distribution of electric refrigerators, electric appliances and gas appliances.

Attorney General Allred of Texas is considering filing suit against the Dallas utilities, similar to the action against the San Antonio Public Service Co. this month, on the ground that their charters do not grant them the right to merchandise appliances.

Following the attorney general's suit, the San Antonio Public Service Co. announced last Friday that it would discontinue its appliance sales.

### GRAND RAPIDS CO. CLOSES DISPLAY CASE CONTRACTS

(Concluded from Page 1, Column 5) of display cases in 8, 10, and 12 ft. lengths for regular commercial applications at temperatures above freezing.

The price schedule provides for suitable discounts to Kelvinator and Copeland dealers and salesmen for these companies will have the full cooperation of the 20 branch offices of the Store Equipment Co. Each branch has complete facilities for designing store fixtures and layout of stores.

At present all manufacturing of refrigeration equipment is being done at the Grand Rapids plant but later the production of refrigerated display cases will be extended to the company's plants in New York City, Baltimore, and Portland, Ore.

Machinery is being installed and tooling is being planned for a line production of 50 display cases per day by the first of next year.

H. W. Ohlhaber, formerly research and test engineer for Swift & Co., in Chicago, has recently joined the staff of Grand Rapids Store Equipment Co.

H. J. Burman, formerly of Frigidaire and Copeland, is national service manager and is now in the east giving instructions on service and sales engineering to the branch organizations.

Zeromatic and Chillomatic cases will be exhibited at the Dairy Industries Exposition at the Auditorium in Atlantic City, N. J., Oct. 26 to 31.

### SEEGER NEW YORK BRANCH OPENS NEW QUARTERS

NEW YORK CITY—The New York offices and showroom of the Seeger Refrigerator Sales Corp. have been moved from Madison Ave. to new quarters at Fourth Ave. and Nineteenth St. The new location increases the office and display space of the company by three times that of the original site.

### BILL GRUNOW GONE; OFFICE IS DESERTED

By Phil Redeker

CHICAGO—Bill Grunow, the once dynamic whip-man of the Majestic production staff and character extraordinary of the radio world, has left the field of active operations as if vanished by magic.

The Grunow corporation, which he proclaimed as a new force in the radio and refrigeration industries after his ousting from the Grigsby-Grunow Corp., last spring, is now just a name placed on the door of a suite of offices located on the fifth floor of the LaSalle-Wacker building in this city.

The doors to the suite were bolted and the glazed glass doors allowed no peek into the interior. Other fifth floor occupants couldn't remember when they had last seen anyone entering or leaving the offices.

Members of the sales force of R. Cooper, Jr., Inc., distributor of General Electric refrigerators, with rooms on the first floor of the building, expressed surprise at the sudden disappearance of the quick-moving entrepreneur.

Attempts to locate Mr. Grunow at his home via the telephone resulted in nothing more informative than—"the party does not answer, shall I continue to ring them?"—from the operator.

### KELVINATOR HORSES SET FOR FINAL STRETCH DRIVE

(Concluded from Page 1, Column 1)

burgh on the Pimlico track and Montgomery, Ala., at Laurel, sprinted to take the next three furlongs, while Williamsport lost the second furlong, but has won the other three at Bowie.

The three leading horses at each of the 10 tracks at the end of the fourth furlong are:

Arlington Park—Greenville, N. C., Denver, and Charlotte, N. C.

Belmont—Scranton, Seattle and Huntington.

Washington Park—Mobile, Ala., Akron, O., and Houston, Tex.

Fairmont—Sault Ste. Marie, Dayton, O., and Albion, Ill.

Laurel—Montgomery, Ala., Lancaster, Pa., and Toledo.

Latonia — Jacksonville, Fla., Little Rock, and Boise, Ida.

Pimlico—Pittsburgh, St. Louis, and Commonwealth Edison, Chicago.

Bowie—Williamsport, New Haven, and Madison.

Hawthorne — Poughkeepsie, N. Y., Clarksburgh, W. Va., and Hagerstown, Md.

Churchill Downs—Syracuse, Washington, Ill., and Buffalo.

### NEW YORKER SETS PACE IN WESTINGHOUSE DRIVE

(Concluded from Page 1, Column 1)

Co., Detroit, carried off the honors of being the first bidder to report. He stepped out on Aug. 1, and closed two sales, netting 172 discs.

Another salesman, A. Black of Allentown, Pa., New York, broke into the builder's column by selling 66 WL-45's for apartment installation. Contest standings through Aug. 10 showed that the Times Appliance Co., New York City, has first place honors, with Wetmore-Savage of Boston running a close second. Third and fourth place positions were occupied by the Iron City Electric Co., Pittsburgh, and Tafel-Williams, Inc., Louisville, respectively.

In addition to merchandise prizes, a Westinghouse WL-65 refrigerator will be presented to the leading salesman at the close of the contest, Sept. 30, while the salesman who has the most discs to his credit on Sept. 1 will receive a Westinghouse Columette radio.

### NORGE SALESMEN ACHIEVE 60% OF CAMPAIGN QUOTA

(Concluded from Page 1, Column 1)

There are some 400 items offered on the prize list, the awards being household commodities, sporting wares, traveling equipment, automobile accessories and other similar products.

The original Norge rollator, to which the Marathon contest has been dedicated, turned its fifth year of continuous 24-hour operation at the Norge plant here last week.

### KELVINATOR OF CANADA SHOWS 36% SALES GAIN

LONDON, Ont.—Total dollar billings to the end of June, 1931, for Kelvinator of Canada, Ltd., were approximately 36 per cent in excess of the same period last year, according to D. T. Kelley of that concern.

### SALESMAN SELLS 42 MODELS IN 30-DAY PERIOD

NEW HAVEN, Conn.—Ralph E. Martin, Frigidaire household salesman, closed 10 separate orders in a 30-day period for a total of 42 household models.



# Helping Dealers MAKE SALES *the year 'round*

**NATIONAL MAGAZINES**  
**LOCAL NEWSPAPERS**  
**OUTDOOR ADVERTISING**  
**DIRECT MAIL**  
**NATIONAL AND LOCAL RADIO**  
**SALESMAN'S TRAINING**  
**WINDOW AND FLOOR DISPLAYS**  
**SALES LITERATURE**

**MARCH**  
**APRIL**  
**MAY**  
**JUNE**  
**JULY**  
**AUGUST**  
**SEPTEMBER**  
**OCTOBER**  
**NOVEMBER**  
**DECEMBER**

**DAY** after day, month after month, the General Electric advertising and sales promotion drive, sending prospective purchasers to General Electric dealers, is maintained.

There is no sudden stopping after enthusiastic beginnings . . . General Electric dealer support carries through, changing a seasonal demand into a year 'round market. Salesmen are instructed in new ways of finding and closing prospects . . . their enthusiasm and efforts are sustained through definite plans tested and proved under all conditions.

And, the General Electric Refrigerator has definite sales advantages in the new

exclusive sliding shelves . . . the efficient Sanitary Super-Freezer . . . the *all-steel* cabinet lined with stain-resisting porcelain . . . the famous Monitor Top, with all mechanism sealed-in-steel . . . the 3-Year Guarantee on all models . . . and an unparalleled performance record in more than a million homes.

With sales-building support the year 'round General Electric dealers are now making greater records as the second million of Monitor Tops go into American homes.

General Electric Company, Electric Refrigeration Department, Section DF 82, 1400 Euclid Avenue, Cleveland, Ohio.

*Join us in the General Electric Program, broadcast every Saturday evening, on a nation-wide N. B. C. network.*

## GENERAL ELECTRIC

### ALL-STEEL REFRIGERATOR

DOMESTIC, APARTMENT HOUSE AND COMMERCIAL REFRIGERATORS—ELECTRIC WATER COOLERS



## DISTRIBUTORS PLAN AUTUMN SALES DRIVE

(Concluded from Page 1, Column 5)

Lights were turned on for the island's major spectacle, its sunsets. The weather was hand-picked during the entirety of the camp.

Shortly after arrival at the island Wednesday morning, everybody was given a costume, the formation was martialled, the band struck up a lively march and, led by the Chrysler Imperial roadster and the Ford pick-up trucks which are the big prizes in the political contest, the whole aggregation paraded around the drill field.

Stopping at the flagpole in the center of the field, the marchers were addressed by Harry Mealey, camp manager, Congressman Charles A. Eaton from New Jersey (who is on the G. E. payroll), and Manager P. B. Zimmerman.

Following this wind-up of the parade, everybody turned noses in the direction of "town hall," where the first general session was held.

Walter Landmesser, manager of the commercial department, discussed "A Complete Commercial Business," and introduced W. M. Timmerman and H. T. Hulett of his department, who made short talks.

Roundly cheered was Chris Steenstrup, engineer who developed the General Electric refrigerating machine. Steenstrup proved he could do more than work with his hands and head by arousing real emotion in a 48-calibre inspirational message.

Concluding the session, Manager Zimmerman summarized the year of General Electric refrigeration activities. Most interesting was Mr. Zimmerman's analysis of the business done by the various types of retail sales outlets during the year.

According to this analysis, there were approximately 2,600 dealers and 2,600

utility stores handling General Electric refrigerators. Each of these groups has been responsible for about 25 per cent of the sales this year.

From 147 distributors' retail stores, representing but two per cent of the total sales outlets, have come 50 per cent of the sales! Approximately 10,000 sales representatives are now working for the organization.

In the afternoon commercial specialists met with Walter Landmesser.

Prefacing a photophone presentation by the International General Electric Co., "Hands Across the Sea," in which pictures of refrigeration installations in foreign countries were shown, Manager Zimmerman awarded prizes to winners in the recent "blimp race" contest, and in the "batting averages" competition.

This latter contest is based on increase in business over the same period for the previous year. It will be continued until the end of November, and in December will be staged a "world's series."

For the period ending July 31, George Patterson, distributor from St. Petersburg, Fla., had the highest average.

R. Cooper, Jr., of Chicago, had second best batting average, Rex Cole of New York was third, E. B. Edmundson of Houston, Tex., was fourth, H. H. Courtright of Fresno, Calif., fifth, F. B. Connelly of Billings, Mont., sixth, and W. N. Hogan of Wheeling, W. Va., seventh.

Prizes were original paintings used for General Electric refrigerator advertising this year. Eight of these paintings were ranged on easels along the stage. George Patterson had first choice, Dick Cooper, second, and so on down the line until seven were gone. The eighth, following a unanimous vote, was given to Chris Steenstrup.

Thursday morning was largely occupied with reports of distributor's committees. C. L. McCrea of Washington, D. C., discussed salesman's compensation, and Warde B. Stringham of Des Moines, Iowa, reported for the central

station committee. H. H. Bosworth led a discussion of the latter report.

L. D. James, St. Louis distributor, presented the dealer committee report, which was followed by a short talk, "Building More and Better Dealers," by A. A. H. Uhalt.

J. J. Donovan discussed apartment division sales plans, and introduced a short humorous skit on the selling of an order to a Jewish apartment owner. Four of Rex Cole's apartment house salesmen, G. J. Stifter, H. H. Raphael, H. Rosenberg, and J. J. Meehan, presented the skit.

George Bauder of San Francisco reported for the finance committee, and Cedric G. Smith of the Cleveland office led discussion.

Wholesale managers and supervisors met with Al Uhalt Thursday afternoon. That night the rookies were initiated, after which there was a torchlight parade, an election rally with appropriate political speeches by Joe Donovan and some of the candidates, and a barbecue feast.

Friday morning's session was featured by a trial of "Old Man Quota," by Walter Daily and a cast including H. G. Selby, H. T. Hulett, E. H. Norling, Al Uhalt, M. T. Bard, K. R. Davis, W. R. Baker, R. C. Shaw, B. F. Slye, and George Belsey.

As the final, prosecuting attorney, Mr. Daily presented the story of the General Electric advertising program for the remainder of the year.

In the afternoon Mr. Daily conferred with sales promotion managers, and A. C. Mayer met with the retail sales managers' club. "Trivialities of 1931," a revue which included a crooning foursome, Mike Mahony's great door-smashing exhibition, and a burlesque on the G. E. sales presentation by a representative of "Sitrite comfort stations," were offered that night.

Friday morning was occupied by an introduction of the political campaign sales contest.

Edwina Nolan, F. B. Slye, and Paul Dow of the Cleveland home office presented a two-act playlet, "What Mrs.

Wallace Said." G. A. Hughes, president of the Hotpoint Edison Co., was introduced. T. K. Quinn, vice president of the General Electric Co., concluded the program.

Before dismissing the assembly, Manager Zimmerman introduced George Chapman, new assistant manager of the refrigeration department.

## Those Present

Men who attended the camp are listed below. Paired names indicate that the two men thus bracketed were tentmates.

F. B. Slye, General Electric Co., Cleveland, and George Kobick, General Electric Co., Cleveland; J. M. Walker, General Electric Co., Cleveland, and H. O. H. Quinn, General Electric Co., Cleveland; M. T. Bard, General Electric Co., Cleveland, and F. M. Corliss, General Electric Co., Cleveland.

Jean DeJen, General Electric Co., Cleveland, and A. A. Uhalt, General Electric Co., Cleveland; A. L. Scaife, General Electric Co., Cleveland, and Paul Dow, General Electric Co., Cleveland; E. H. Norling, General Electric Co., Cleveland, and Ken Davis, General Electric Co., Cleveland.

H. C. Mealey, General Electric Co., Cleveland, and W. J. Daily, General Electric Co., Cleveland; M. F. Mahoney, General Electric Co., Cleveland, and C. G. Smith, General Electric Co., Cleveland; A. L. Sweeney, General Electric Co., Cleveland, and G. C. Wason, General Electric Co., Cleveland.

J. J. Donovan, General Electric Co., Cleveland, and H. P. Smith, General Electric Co., Cleveland; A. C. Mayer, General Electric Co., Cleveland, and W. C. Noll, General Electric Co., Cleveland; William Timmerman, General Electric Co., Cleveland, and W. E. Landmesser, General Electric Co., Cleveland.

H. H. Bosworth, General Electric Co., Cleveland, and H. Uhalt, General Electric Co., Cleveland; D. F. Hines, the Hines Co., Baltimore, Md., and Gordon Smith, Alabama Refrigeration Co., Birmingham, Ala.; R. T. Bard, Bard-Barger, Inc., Columbus, O., and H. C. Bogart, Jr., H. B. Bogart Co., Toledo, O.

B. C. Ritter, General Electric Co., Denver, Colo., and G. S. Miller, Penn Heat Control Co., Philadelphia, Pa.; G. J. Ruck, General Electric Co., San Francisco, Calif., and A. E. Freshman, General Electric Co., Memphis, Tenn.; Turner Barger, Bard-Barger, Inc., Columbus, O., and C. H. Stull, Caswell-Stull, Inc., Detroit.

S. G. Trainor, Modern Home Utilities, Inc., Waterbury, Conn., and L. L. Stacy, Modern Home Utilities, Inc., Waterbury, Conn.; Frank Edwards, Frank Edwards Co., Salt Lake City, Utah, and W. D. Alexander, W. D. Alexander Co., Atlanta, Ga.; J. E. Neily, Modern Home Utilities, Inc., Waterbury, Conn., and Carl Johnson, Johnson Electric Co., Wichita, Kan.

A. F. Head, Hoosier Electric Refrigeration Corp., Indianapolis, Ind., and E. M. Farmer, Gould-Farmer Co., Portland, Me.; Frank Wolf, Erco, Inc., Buffalo, and Charles Gould, Gould-Farmer Co., Portland, Me.; L. W. Driscoll, Southern Refrigeration Co., Charlotte, N. C., and D. C. Goff, Southern Refrigeration Co., Charlotte, N. C.

Clark Adams, Clark Adams, Inc., Atlantic City, N. J., and Don Breckenridge, Breckenridge, Inc., Springfield, Mass.; S. C. Griswold, Griswold-Rogers, Inc., Dallas, Tex., and T. J. Sullivan, A. G. Riddick, Inc., New Orleans, La.; C. F. Neave, International G. E. Co., New York City, and A. G. Riddick, A. G. Riddick, Inc., New Orleans, La.

L. H. Bennett, L. H. Bennett Co., Ltd., San Francisco, Calif., and H. H. Courtright, Valley Electric Supply Co., Fresno, Calif.; C. E. Wilson, General Electric Co., Bridgeport, Conn., and H. F. Barnes, General Electric Co., Nela Park, Cleveland; C. F. Morrison, General Electric Co., New York City, and C. A. Eaton, General Electric Co., Nela Park, Cleveland.

E. J. Nellor, Electric Refrigeration Co., Louisville, Ky., and C. L. McCrea, National Electrical Supply Co., Washington, D. C.; H. L. Parsons, Newton-Parsons Co., Hartford, Conn., and Mark Wright, Wright Bros. Refrigeration Co., San Antonio, Tex.; R. S. Montgomery, Commonwealth Refrigeration Co., Richmond, Va., and E. O. Cone, E. O. Cone Co., El Paso, Tex.

R. H. Ferguson, General Electric Co., Chicago, and B. M. Walthall, General Electric Co., Cleveland; C. D. Gentsch, Gentsch-Thompson, Inc., Boston, Mass., and A. S. Dunning, A. S. Dunning, Inc., Duluth, Minn.; L. H. Hawkins, General Electric Co., Schenectady, N. Y., and W. L. Merrill, General Electric Co., Schenectady, N. Y.; Rex Cole, Rex Cole, Inc., New York City, and R. Cooper, Jr., R. Cooper, Jr., Inc., Chicago.

P. H. Harrison, P. H. Harrison & Co., Newark, N. J., and J. O. Morris, Page-Morris, Inc., Albany, N. Y.; N. K. Ovalle, N. K. Ovalle, Inc., Harrisburg, Pa., and E. H. Schaefer, E. H. Schaefer Corp., Milwaukee, Wis.; H. D. Laidley, the Laidley Co., Portland, Ore., and O. F. Stuefer, O. F. Stuefer, Inc., Minneapolis, Minn.

George T. Bauder, George T. Bauder, San Diego, Calif., and George Belsey, George H. Belsey Co., Ltd., Los Angeles, Calif.; G. J. Chapman, General Electric Co., Cleveland, and S. C. Caswell, Caswell-Stull, Inc., Detroit; Clarence Wheeler, Wheeler-Consler Corp., Rochester, N. Y., and Dan Willis, the Willis Co., Akron, O.

W. L. Thompson, Gentsch-Thompson, Inc., Boston, Mass., and L. D. James, James & Co., St. Louis, Mo.; W. B. Stringham, Warde B. Stringham Co., Des Moines, Ia., and F. T. Harvey, General Electric Co., New York City; C. T. Miller, General Contract Purchase Corp., Cleveland, and W. H. Crawford, General Contract Purchase Corp., Lowell, Mass.

R. C. McKay, Eastern Service Refrigerator Co., Lowell, Mass., and W. N. Hogan, Inc., Wheeling, W. Va.; L. J. Spiers, H. & G. Refrigeration Co., Greenville, S. C., and Dupont Quarry, H. & G. Refrigeration Co., Greenville, S. C.; S. F. O'Bannon, O'Bannon Bros., Little Rock, Ark., and A. J. Finck, Storz Electric Refrigeration Co., Cleveland, O.

Lou Maxon, Maxon, Inc., Cleveland, and Kenneth Connelly, F. B. Connelly Co., Billings, Mont.; E. C. Newton, Newton-Parsons Co., Hartford, Conn., and C. M. Randel, Judson C. Burns, Inc., Philadelphia; H. C. Minier, W. D. Alexander Co., Atlanta, Ga., and H. G. Bogart, Sr., H. G. Bogart Co., Toledo, Ohio.

Harry Falkell, L. H. Bennett Co., Ltd., San Francisco, Calif., and L. H. Miller, Electric Refrigeration Co., Louisville, Ky.; R. Stevenson, Rex Cole, Inc., New York City, and E. G. Cloud, R. Cooper, Jr., Inc., Chicago; E. H. Campbell, Rex Cole, Inc., New York City, and H. W. Gifford, R. Cooper, Jr., Inc., Chicago.

L. H. Jenks, Jr., Rex Cole, Inc., New York City, and E. W. Parish, R. Cooper, Jr., Inc., Chicago; Paul Hitehorn, Rex Cole, Inc., New York City, and J. Eccleston, Erco, Inc., Buffalo; J. J. Massimi, Rex Cole, Inc., New York City, and C. G. Road, R. Cooper, Jr., Inc., Chicago.

M. E. Pipkin, Rex Cole, Inc., New York City, and L. C. Kohlman, R. Cooper, Jr., Inc., Chicago; D. A. Kirkland, Eastern Service Refrigerator Co., Omaha, Nebr., and D. A. Kelly, Storz Electric Refrigeration Co., Albany, N. Y.; C. P. Logan, Page-Morris, Inc., Albany, N. Y., and E. T. Shepard, Page-Morris, Inc., Albany, N. Y.

S. J. Picot, Page-Morris, Inc., Albany, N. Y., and J. E. Barnes, Page-Morris, Inc., Albany, N. Y.; E. F. Flyer, Page-Morris, Inc., Albany, N. Y., and R. J. McHugh, Page-Morris, Inc., Albany, N. Y.; A. P. Rafferty, Page-Morris, Inc., Albany, N. Y., and C. N. Millet, Page-Morris, Inc., Albany, N. Y.

J. L. Bouton, Commonwealth Refrigeration Co., Richmond, Va., and A. J. Selbit, General Electric Co., Ft. Wayne, Ind.; John Goudy, Edmundson Refrigerating Corp., Houston, Tex., and T. B. Allen, the Willis Co., Akron, O.; R. W. Downing, Valley Electrical Supply Co., Fresno, Calif., and C. T. Johnson, Wheeler-Consler Corp., Rochester, N. Y.

L. J. Gleason, O. F. Stuefer, Inc., Minneapolis, Minn., and L. E. Kleckner, O. F. Stuefer, Inc., Minneapolis, Minn.; C. K. Johnston, N. K. Ovalle, Inc., Harrisburg, Pa., and A. M. Ryser, D. S. Stophlet, Inc., Madison, Wis.; J. E. Morton, Ochiltree Electric Co., Pittsburgh, Pa., and F. E. Page, Ochiltree Electric Co., Pittsburgh, Pa.

J. A. DuBois, National Electrical Supply Co., Washington, D. C., and C. H. Miller, O'Bannon Bros., Little Rock, Ark.; E. L. Hill, James & Co., St. Louis, Mo., and W. D. Jackson, Milnor Refrigeration Co., Cincinnati; H. J. Rieckers, P. H. Harrison & Co., Newark, N. J., and N. E. Fields, the Hines Co., Baltimore, Md.

W. A. Ropes, P. H. Harrison Co., Newark, N. J., and D. B. Collins, P. H. Harrison Co., Newark, N. J.; J. H. Lathrop, Griswold-Rogers, Inc., Dallas, Tex., and A. B. Judge, P. H. Harrison Co., Newark, N. J.; Irving Mack, Gould-Farmer Co., Portland, Me., and W. H. Clifford, Gould-Farmer Co., Portland, Me.; Gordon Craig, Gentsch-Thompson, Inc., Boston, and F. K. Chilton, Eastern Service Refrigerator Co., Boston; Henry Raymond, Gentsch-Thompson, Inc., Boston, and W. H. Ryan, Gentsch-Thompson, Inc., Boston; H. Y. Dannelly, Electric Refrigeration Co., Louisville, Ky., and A. J. Frather, Electric Refrigeration Co., Louisville, Ky.

B. L. Wood, Frank Edwards Co., Salt Lake City, Utah, and A. S. Davis, Electric Refrigeration Co., Louisville, Ky.; R. C. Hall, Commonwealth Refrigeration Co., Richmond, Va., and R. F. Davey, Cushman Refrigeration Co., Cleveland; Harry Warren, Hoosier Electric Refrigeration Corp., Indianapolis, Ind., and W. G. Gay, Commonwealth Refrigeration Co., Richmond, Va.

J. H. Bradley, George Patterson, Inc., St. Petersburg, Fla., and R. A. Cartmel, George Patterson, Inc., St. Petersburg, Fla.; W. H. Leahy, R. Cooper, Jr., Inc., Chicago, and William Fisher, Rex Cole, Inc., New York City; C. S. Morash, Judson C. Burns, Inc., Philadelphia, and D. F. Secord, Rex Cole, Inc., New York City.

J. A. Luce, Breckenridge, Inc., Springfield, Mass., and O. A. Jensen, Breckenridge, Inc., Springfield, Mass.; J. M. Breckenridge, Breckenridge, Inc., Springfield, Mass., and G. H. Smith, Caswell-Stull, Inc., Detroit, Mich.; E. W. Hart, H. G. Bogart Co., Toledo, O., and G. E. Haney, George H. Belsey Co., Ltd., Los Angeles.

D. C. Alexander, W. D. Alexander Co., Atlanta, Ga., and R. H. Curtis, George H. Belsey Co., Ltd., Los Angeles; C. R. Thacker, Ahrens Refrigerator Co., Oklahoma City, Okla., and E. C. Ricker, Ahrens Refrigerator Co., Oklahoma City, Okla.; W. G. Stuefer, E. H. Schaefer Corp., Milwaukee, Wis., and E. M. Diehl, the Willis Co., Akron, O.

T. K. Quinn, General Electric Co., New York City, and P. B. Zimmerman, General Electric Co., Cleveland; B. K. Sweeney, B. K. Sweeney, Inc., Denver, Colo., and E. B. Edmundson, Edmundson Refrigerating Corp., Houston, Tex.; M. A. Glueck, Glueck & Co., Kansas City, Mo., and George Patterson, George Patterson, Inc., St. Petersburg, Fla.

C. Lichtenberg, General Electric Co., Ft. Wayne, Ind., and Chris Steenstrup, General Electric Co., Schenectady, N. Y.; J. C. Burns, Judson C. Burns, Inc., Philadelphia, and R. P. Burns, Judson C. Burns, Inc., Philadelphia; F. H. Cushman, Cushman Refrigeration Co., Cleveland, and F. B. Connelly, F. B. Connelly Co., Billings, Mont.

G. A. Hughes, Hotpoint Edison Co., Chicago, and P. L. Miles, Hotpoint Edison Co., Chicago; George F. Taubeneck, Electric Refrigeration News, Detroit, and Fred Bollmeyer, Maxon, Inc., Cleveland; H. L. Wynegar, General Contract Purchase Corp., Cleveland, and S. E. Stewart, Electric Home Appliance Co., Oklahoma City, Okla.

Albert Ahrens, Ahrens Refrigerator Co., Oklahoma City, Okla., and G. C. Davidson, Canadian General Electric Co., Toronto, Can.; Gordon Prentice, Gordon Prentice, Inc., Seattle, Wash., and A. S. Edgar, Canadian General Electric Co., Toronto, Can.; E. C. Pangburn, International G. E. Co., New York City, and H. S. Brown, Canadian General Electric Co., Toronto, Can.

A. R. Stevenson, Jr., General Electric Co., Schenectady, N. Y., and C. Dantszen, General Electric Co., Schenectady, N. Y.; R. W. Ayres, General Electric Co., Schenectady, N. Y., and P. C. Morganthaler, General Electric Co., Ft. Wayne, Ind.; R. W. Turnbull, Hotpoint Edison Co., Chicago, L. T. Milnor, Milnor Refrigeration Co., Cincinnati.

H. W. Eagles, General Electric Co., Erie, Pa., and R. A. Kind, General Electric Co., Erie, Pa.; W. H. Ochiltree, Ochiltree Electric Co., Pittsburgh, Pa., and H. W. Matthews, Alabama Refrigeration Co., Birmingham, Ala.; H. E. Johnson, General Electric Co., Cleveland, O., and E. H. Wiggs, General Electric Co., Cleveland.

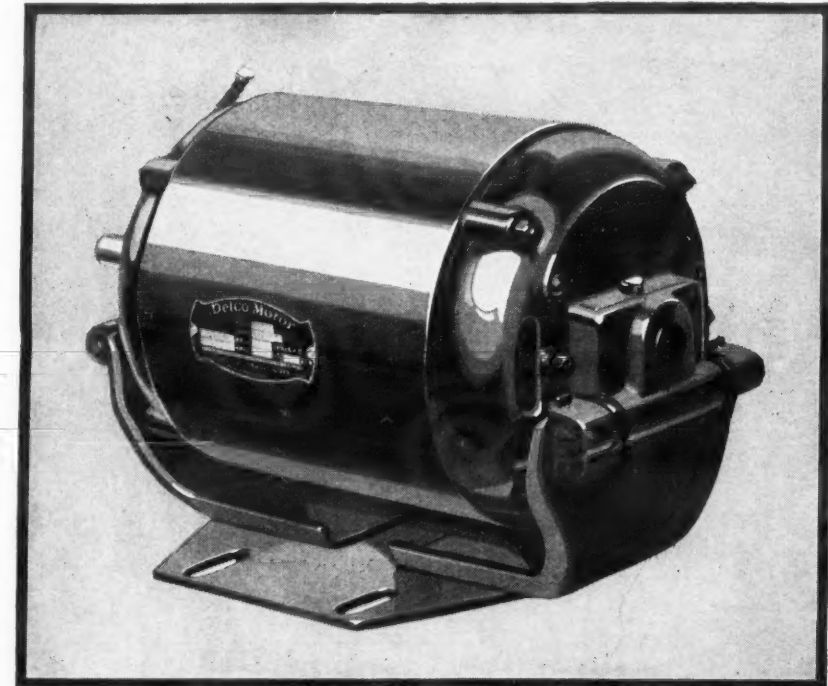
R. C. Shaw, General Electric Co., Cleveland, and A. H. Johnson, the Hinds Co., Baltimore, Md.; R. L. Hughes, James & Co., St. Louis, Mo., and Art Radtke, Milnor Refrigeration Co., Cincinnati; R. E. McMillin, Page-Morris, Inc., Albany, N. Y., and J. R. Atkinson, Page-Morris, Inc., Albany, N. Y.

E. R. Mason, Page-Morris, Inc., Albany, N. Y., and Charles Thomas, Page-Morris, Inc., Albany, N. Y.; O. M. Wolf, E. H. Schaefer Corp., Milwaukee, Wis., and P. H. Sawyer, Warde B. Stringham Co., Des Moines, Ia.; Carl Ballus, the Willis Co., Akron, O., and D. G. Keller, Glueck & Co., Kansas City, Mo.

F. P. Lutz, F. P. Lutz Co., Dayton, O., and E. P. Gibson, George H. Belsey Co., Ltd., Los Angeles; T. E. Babson, P. H. Harrison & Co., Newark, N. J., and John Hewlett,

(Concluded on Page 8, Column 4)

# A REFRIGERATOR MOTOR IS DIFFERENT



Quiet operation almost always is a refrigerator buyer's criterion of mechanical perfection. He listens for evidence of quality. Often he will

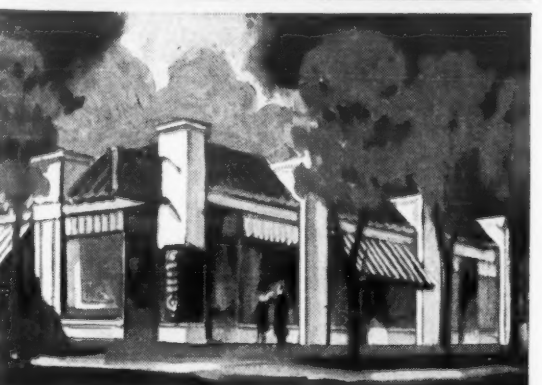
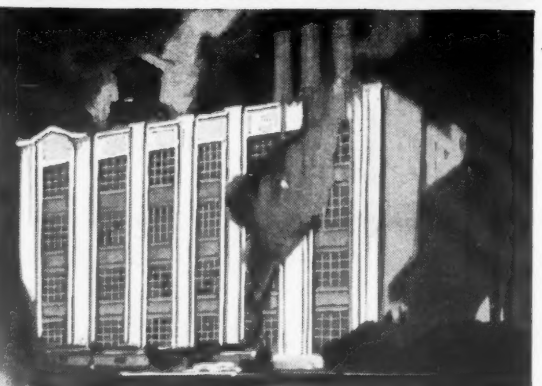
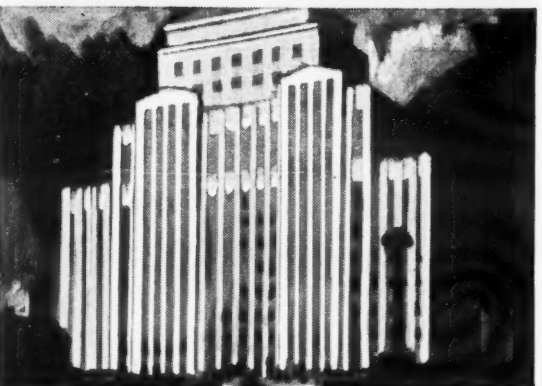
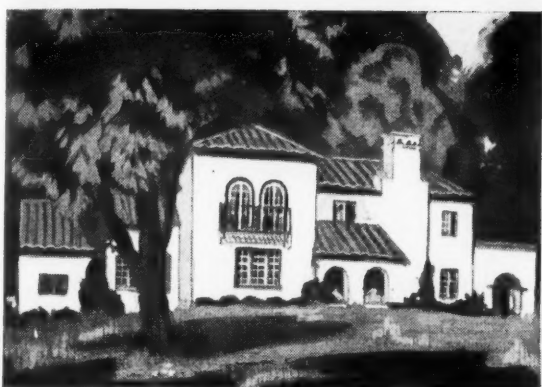
object to the mere hum of a perfectly-built motor of the conventional type. But he hears no objectionable hum when a Delco Motor powers the unit. Delco engineers have hushed the hum, as they have silenced commutator noise and quieted the brush-lifting mechanism. In every detail, Delco Motors are exactly suited to refrigerator requirements. More than two million in use today are attesting to their dependable construction.

DELCO PRODUCTS CORPORATION, DAYTON, OHIO





# IT IS A FACT!



## NO OTHER SALES AGREEMENT

in the industry offers such complete market coverage of *all domestic and commercial markets* as the Kelvinator Agreement. Every prospect for electric refrigeration in your territory is a Kelvinator prospect —YOUR PROSPECT if you are handling Kelvinator.

Small homes—large homes—apartment houses—office buildings—retail stores—factories—farms—every place where electric refrigeration is needed, represents a source of volume and profit for the Kelvinator dealer.

Logically, such complete market coverage offers a *profit potential* that cannot be equalled by any other refrigeration franchise. With Kelvinator, your profits are not dependent upon an incomplete line of domestic cabinets. You have 15 different cabinets—a size and style for *every* prospect in your town. And, in addition to

full coverage of the domestic market, you have the *finest* and *most complete* line of commercial equipment in the industry—BAR NONE. And the commercial market represents a profit potential that is comparable to that offered by the domestic market.

*It is a fact* that no other franchise offers such complete coverage—such an unlimited profit potential. Such being the case—couldn't YOU make MORE MONEY with Kelvinator in 1932? Write us to-day.

KELVINATOR CORPORATION  
14245 Plymouth Road, Detroit, Michigan  
Kelvinator of Canada, Limited, London, Ontario  
Kelvinator Limited, London, England  
(354)

# Kelvinator



## GAS GROUP SPONSORS COOPERATIVE DRIVE

SAN FRANCISCO, Calif.—According to an announcement by the Pacific Coast Gas Association, a cooperative campaign on gas refrigeration is now being featured in *Sunset* magazine, west coast periodical. From one-third page to full page space is being reserved for this purpose in various numbers of the magazine.

In announcing the campaign, the official bulletin of the association makes the following statement: "Gas refrigeration has the best load factor of any domestic appliance; it helps sell gas ranges, and the gas consumption is often enough to bring an unprofitable 'minimum' consumer up out of the red ink. There are now over 150,000 gas refrigerators in use, and about four per cent of these are on the Pacific Coast."

## OMAHA REFRIGERATION SHOW OPENS SEPT. 14

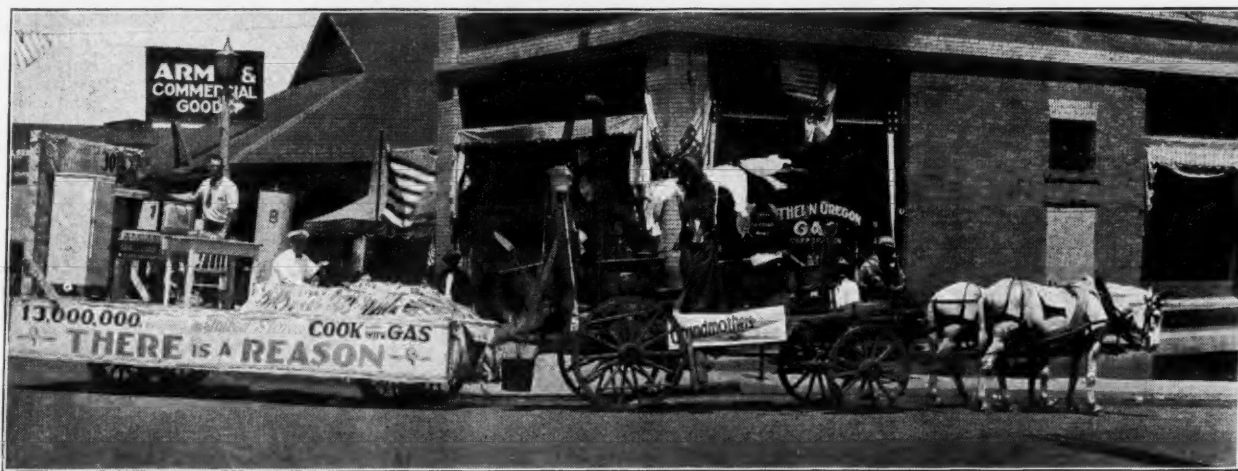
OMAHA—Local refrigeration dealers will cooperate in an exposition to be held from September 14 to 19 in the Ak-Sar-Ben coliseum. Radios and electrical appliances will be shown also.

### WE BUY New and Used ELECTRIC REFRIGERATORS In Any Condition

Phone, Write or Wire All Details,  
Type of Motor, Size of Box, Etc.

**KASKEY & QUINN, Inc.**  
525 Arch Street Philadelphia, Pa.

## From Grandmother To Granddaughter



First place in a recent parade was won by Southern Oregon Gas Corp., with its float, "The Spirit of Independence." The first float showed the kitchen of yesterday, while the second truck was an up-to-date kitchen equipped with an Electrolux.

## MAJESTIC DISTRIBUTOR STAGES SALES MEETINGS

HARTFORD, Conn.—Stern & Co., distributor of Majestic refrigerators in Connecticut, western Massachusetts, and Vermont, recently staged a series of seven sales meetings for its dealers in as many key points.

The meetings were held at New Haven, Hartford, Norwich, Conn., Springfield and Pittsfield, Mass., and White River Junction and Burlington, Vermont.

Hugh C. Pullen, sales promotion manager, was in charge of the meetings, discussing with the dealers plans for a building-up of sales organizations in preparation for next season. He was assisted in each locality by the wholesale representative.

## Tire Chain Stores Add Refrigerators

CLEVELAND—Marketing of Norge electric refrigerators through a chain of tire stores has been adopted in this district.

Meisel Tire Co., national chain, has secured a dealer franchise for the refrigerators in the local area from Strong, Carlisle & Hammond, Norge distributor. Eight local stores have been opened.

## BUYS SERVEL COMMERCIAL

JACKSON, Miss.—Serval commercial equipment has been installed in the new North End Grocery Co. by the T. J. Neal Co.

## BOSTON KELVINATOR CORP. HOLDS ANNUAL OUTING

BOSTON—The Kelvinator Sales Corp. held the annual outing for employees at the Worrick Inn grounds, Aug. 12. Factory officials who attended as guests of the Boston office included: G. Strelinger, manager of branches; L. L. Langely, J. K. Stewart, A. A. Smith, E. R. Legg, and A. P. Smith.

Officials of the Boston office who attended were: Harry Troutwine, manager; Frank J. Ritz, service manager; Charles M. Attmore, assistant manager; and W. M. Little, retail sales manager.

David R. Bates was chairman of the picnic committee and he was assisted by John Mullin, Frank J. Bitz, Mary Mullin, and Mildred Scott.

The miniature golf tournament for girls was won by Mildred Griffin, with Theresa Mulloy second, and Helen Pearlmuter third. The tournament for the men was won by Lasell Marden. Thomas M. Olsen was second and John Harold third.

The nursing bottle contest saw Oscar Price win with something to spare. Richard Harper was second in this contest and Jerry Vosberg third.

The rolling pin toss was won by Mildred Scott.

Fat man's race was won by J. K. Stewart, with Charles M. Attmore second. The quito pitching contest found T. M. Olsen first, and Al Smith second.

## GIBSON WILL MANAGE CALIFORNIA REDISCO

DETROIT—Announcement is made by C. M. Armstrong, vice president and manager of the Refrigeration Discount Corp. of three changes in the personnel of his department.

A. E. Gibson, who for several years, has headed the new business department of the corporation, has received the appointment of manager of the California Refrigeration Discount Corp., which is a subsidiary of ReDisCo.

D. D. Stitt, who has been, for the last two years, associated with ReDisCo, accompanies Mr. Gibson, having been appointed credit and collection manager of California ReDisCo.

James J. O'Neil succeeds A. E. Gibson as manager of the new business department of ReDisCo. Mr. O'Neil was formerly associated with ReDisCo, but for the last year and a half was credit and collection manager of Kelvinator Sales Corp., Pittsburgh.

Mr. O'Neil has for many years been associated in the instalment finance business.

## RUTHENBERG ENTERTAINS NEW YORK BRANCH STAFF

NEW YORK—The second semi-annual banquet awarded to the New York branch of Copeland Products, Inc., Mt. Clemens, Mich., was held at the New Yorker hotel, Monday night, Aug. 24.

It was attended by 175 Copeland representatives.

These banquets are given by Louis Ruthenberg, president of Copeland Products, to the branch showing the best performance during a six months' period. The period for which this banquet was awarded was the one from Jan. 1 to June 30.

The items taken into consideration are volume of sales, profits, inventory turnover and receivable turnover.

In addition to Mr. Ruthenberg, the banquet was attended by Edwin H. Brown, vice president, and Carleton S. Smith, secretary and treasurer.

## G. E. DISTRIBUTOR TO EQUIP 25 APARTMENT HOUSES

KANSAS CITY—Glueck & Co., General Electric distributor, reports the installation of electric refrigerators in 25 apartment houses during the last 90 days.

# TAKE both HANDS AND push!



The refrigerator merchant who uses C. I. T. Finance Service protects his working capital against becoming frozen in customer paper; perhaps even more important, he protects himself and his organization against frittering away many hours on instalment detail . . . time that should go to building new business.

We have made our Refrigerator Financing Plans complete—not merely in theory but complete in actual field operation through our unique network of fully-functioning Local Offices throughout the country. In the C. I. T. Office near you, near your customers, you will find trained finance men to check purchaser credits, buy paper, make collections and effectively relieve you of all credit sales burden.

With this type of Finance Service applicable to all standard models and available at low cost, there is no reason why any responsible dealer should be content with less than C. I. T. offers—100% Cooperation . . . the kind that really frees you to take both hands and push your sales program.

## C.I.T. CORPORATION

ONE PARK AVENUE, NEW YORK

A Unit of

COMMERCIAL INVESTMENT TRUST CORPORATION  
CAPITAL AND SURPLUS OVER \$90,000,000

Subsidiary and Affiliated Operating Companies with Head Offices in New York  
Chicago ~ San Francisco ~ Toronto ~ London ~ Berlin ~ Brussels ~ Paris  
Copenhagen ~ Havana ~ San Juan, P. R. ~ Mexico City ~ Buenos Aires  
Sao Paulo ~ Sydney, Australia ~ Offices in more than 160 cities.



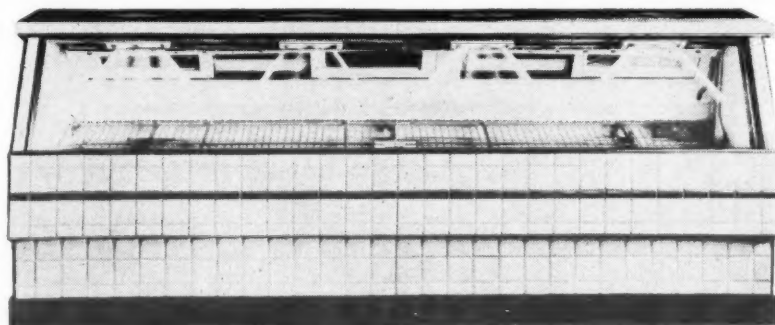
THESE C. I. T. LOCAL OFFICES WILL  
WELCOME YOUR INQUIRY

Abilene ~ Akron ~ Albany ~ Allentown  
Altoona ~ Amarillo ~ Asbury Park ~ Asheville  
Atlanta ~ Augusta ~ Baltimore ~ Bay Shore  
Beckley ~ Binghamton ~ Birmingham  
Bloomington ~ Bluefield ~ Boise ~ Boston  
Bronx ~ Brooklyn ~ Buffalo ~ Butte  
Camden ~ Charleston ~ Charlotte ~ Chicago  
Cincinnati ~ Clarksburg ~ Cleveland  
Columbia ~ Columbus ~ Dallas ~ Davenport  
Dayton ~ Denver ~ Des Moines ~ Detroit  
El Paso ~ Erie ~ Fort Wayne ~ Fort Worth  
Fresno ~ Glens Falls ~ Grand Rapids  
Green Bay ~ Greensboro ~ Greenville  
Hagerstown ~ Harrisburg ~ Hartford  
Hempstead ~ Hickory ~ Houston ~ Huntington  
Indianapolis ~ Jackson ~ Jacksonville  
Jamaica ~ Jamestown ~ Jersey City ~ Johnson  
City ~ Kansas City ~ Kenosha ~ Knoxville  
Lansing ~ Lexington ~ Lincoln ~ Little Rock ~ Los  
Angeles ~ Louisville ~ Manchester ~ Memphis  
Miami ~ Milwaukee ~ Minneapolis ~ Minot  
Montgomery ~ Montpelier ~ Mt. Vernon  
Nashville ~ Newark ~ New Haven ~ New  
Orleans ~ New York ~ Norfolk ~ Oklahoma  
City ~ Omaha ~ Orlando ~ Owensboro  
Philadelphia ~ Phoenix ~ Pittsburgh ~ Portland,  
Me. ~ Portland, Ore. ~ Poughkeepsie  
Providence ~ Raleigh ~ Reading ~ Reno  
Richmond ~ Roanoke ~ Rochester  
Sacramento ~ St. George ~ St. Louis ~ Salt  
Lake City ~ San Antonio ~ San Diego ~ San  
Francisco ~ San Jose ~ Seattle ~ Sioux Falls  
South Bend ~ Spokane ~ Springfield ~ Spring  
Valley ~ Stockton ~ Syracuse ~ Tampa ~ Toledo  
Tucson ~ Tulsa ~ Utica ~ Washington ~ Wheeling  
White Plains ~ Wichita ~ Wilkes-Barre  
Youngstown.

## Pre-cut Fresh Meats

CAN BE PLACED IN EVERY GROCERY STORE  
BY THE DEALER IN ELECTRIC REFRIGERATION

The Super-Cold system of scientific cut meat merchandising shows how to do this efficiently.

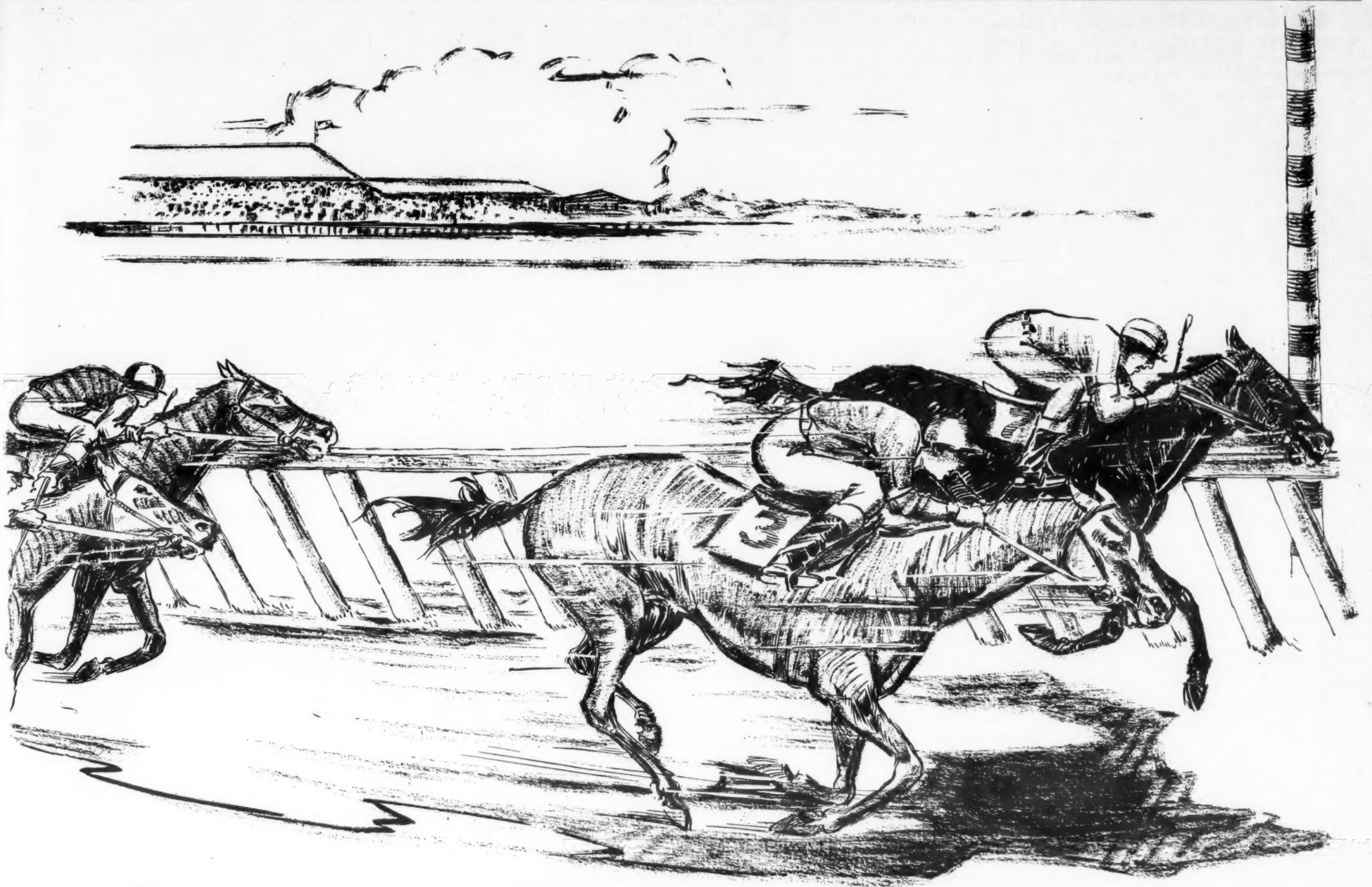


Electric refrigeration dealers who have gone into this field are cleaning up when they can prove the grocer can handle fresh cut meats without employing a meat cutter if his volume of meat sales is not sufficient to stand regular market overhead. This is made possible with the Super-Cold system of temperature and humidity control which permits fresh cut meats to be held on display until sold without de-hydration, discoloration or contamination. This system works in conjunction with any standard make of compressor.

Eighteen voluntary chains have already adopted this system as standard. Over 5,000 grocers are now using this system successfully all over the United States. Send for this money making proposition for electric refrigeration dealers. Learn how cut fresh meats are successfully merchandised. Write for booklet, "Scientific merchandising of pre-cut fresh or frozen meats." Exclusive territories. Warehouse stocks in most cities. The most successful system now on the market.

**Commercial Refrigerator Mfg. Co., Ltd.**  
1020 East 59th Street, Los Angeles, Calif.





## It's as easy to keep apace as remain a neck behind!

It's the crowds and excitement, sleek horse-flesh and the weather that make a horse race. But it's having the "stuff" and a smart jockey that make a winner.

Refrigerators that haven't the "stuff" are handicapped from the start. In the race for business their makers stay a neck or more behind, though they must strain and fight as hard as the leaders.

Manufacturers who realize the handicap imposed on refrigerators by parts that are not 100%, are using Dry-Zero Pliable Slab insulation to insure the utmost efficiency for the life of their cabinets.

The entire refrigerating industry recognizes the high quality and superior efficiency of Dry-Zero insulation. No longer is it necessary to point to results by such impartial testing authorities as U. S. Bureau of Standards, national institutes, etc., for proof of Dry-Zero supremacy. Its use in thousands of domestic refrigerators, refrigerated trucks and railroad refrigerator cars over long periods has indicated to refrigerating engineers that Dry-Zero must be used for best results.

Refrigerating engineers have themselves pointed to the important considerations in selecting insulation:

THERMAL EFFICIENCY  
FACTORY APPLICATION

LIFE

EFFECTS OF MOISTURE  
ODOR

Now notice how Dry-Zero is superior in every respect. It has the highest thermal efficiency; it will outlast the refrigerator; the Dry-Zero fibre is so resistant to moisture that it is used in U. S. Navy life belts; its sealing flange and cut-to-size measurements provide instant installation with sufficient resilience to counteract assembly irregularities; it can never absorb or give off odors.

Those foresighted refrigerator manufacturers who are using Dry-Zero are keeping apace through the ability to use their superior insulation as a powerful selling argument.

**DRY-ZERO CORPORATION**  
Merchandise Mart - Chicago, Illinois  
Canadian Office - 465 Parliament Street, Toronto

**DRY-ZERO**  
THE MOST EFFICIENT COMMERCIAL INSULANT KNOWN



## MERCHANDISING SECTION ELECTRIC REFRIGERATION NEWS

The Business Newspaper of the Refrigeration Industry

Published Every Two Weeks by

BUSINESS NEWS PUBLISHING CO.

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IMPORTANT NOTICE: Beginning Sept. 9, 1931, Electric Refrigeration News will be issued every week. The Refrigerated Food Section will appear as a separate publication, Refrigerated Food News, on September 1. Subscription rates as given above will not include Refrigerated Food News after September 30, 1931.

F. M. COCKRELL, Publisher

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JOHN DITTLER, Managing Editor

JOHN T. SCHAEFER, Engineering Editor

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Member, Audit Bureau of Circulations

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### Editorial Aims of the News

To encourage the development of the art.

To promote ethical practices in the business.

To foster friendly relations throughout the industry.

To provide a clearing house for new methods and ideas.

To broadcast the technical, commercial and personal news of the field.

### Fall Sales

REPORTS that total sales of household electric refrigerators for 1931 are now running somewhere between 700,000 and 800,000 complete units again raise the question as to whether or not the goal of 1,000,000 electric refrigerators, set by the N. E. L. A. for 1931, will be achieved.

That it may be safe to hazard an affirmative answer is indicated by evidence that the industry is now engaged in the biggest concerted fall selling effort it has ever attempted.

Following a slow and inauspicious beginning—caused by the late spring, the delay of sales campaigns by public utilities, and depression sales resistance—the sales curve took a sudden bound upward in April, when many companies established new all-time sales records, and it has kept climbing steadily ever since.

### Peak Season Stretched

Hot weather, sales contests, and the unprecedented activity of some of the smaller organizations have helped the industry stretch its peak selling season considerably beyond its usual point of decline.

In past years the coming of September and October has rung down the curtain on sales of electric refrigerators for the year. Dealers and salesmen persisted in believing the shibboleth that electric refrigeration could be sold only in Spring and summer.

Although manufacturers talked about the necessity for a revival of effort in the fall, little was done to spur sales forces on to more intensive labors during the cold months.

### Contests Going Strong

This year, however, it looks as if the trick will be turned at last. The refrigeration department of the General Electric Co. is getting all set for a "political campaign" sales contest, which will run through September, October, and November. Westinghouse has just inaugurated a "build-a-refrigerator" contest. Frigidaire's fifteenth anniversary jubilee and Kelvinator's comparison campaign are running in high gear. Norge salesmen are battling for honors and prizes in a "marathon rollator" contest, that company's first national inter-organization competition. Copeland has just begun a contest, and Servel is concluding one, as is Apex. Majestic officials are laying plans for a fall campaign.

Added to these organized movements toward increased fall sales will be activities of the N. E. L. A. electric refrigeration bureau. Food preservation will be emphasized in a series of

national advertisements, a "refrigeration week" will be held October 3 to 10, and more cooperative exhibits will be set up by local bureaus throughout the nation.

### On Right Track

That the industry is on the right track may be inferred from the nature of the contests themselves, which are directed toward arousing the enthusiasm and spirit of battle among dealers and their salesmen.

By redoubling their efforts in order to gain the prizes and honors offered by the home office, they may discover that electric refrigerators can be sold during the fall, in spite of their previous notions to the contrary. And the nub of the whole matter of so-called "off-season" sales consists of the education of dealers and salesmen.

The building of a satisfactory sales volume during the coming autumn will be accomplished by the collective efforts of great numbers of individual salesmen and dealers. Many of these dealers, however, will have temporarily forgotten refrigeration this fall, putting all their time and energy into the merchandising of radios, oil burners, and other appliances which have their big seasons in colder weather. Manufacturers and distributors of electric refrigerators may find it necessary to increase their dealer promotion programs considerably in order to keep the minds of such dealers on refrigeration during the immediately ensuing months.

### Million Units

Leading manufacturers apparently have concurred this year in promoting fall sales contests to focus the attention of dealer bodies upon refrigeration at a time when they have been accustomed to wander into seemingly greener pastures. And if these sales races are finished at the same pace with which they started, it seems a foregone conclusion that a million domestic electric refrigerators will have been sold by the end of the year.

## GLEANINGS

FROM RECENT PERIODICALS

Dear Editor: I have just bought an electric refrigerator. When I told my friends, they said: "That's good. That will help employment." Now, since I have dispensed with my ice man, since I have cut my milk bill (for the milk does not now go sour), and since I can keep fruit and "leftovers" longer, have I actually taken a step that will help to stimulate trade? I shall buy no ice. I shall buy less food, in all probability. Do I help prosperity?

Yes, reader, you "help prosperity." By taking the hundred, or three hundred dollars out of the bank and putting it into circulation, by distributing it among the myriad trades which contribute to making electric refrigerators, you assist in lifting business out of its subnormal condition. You aid the bank which is almost embarrassed by the accumulation of yours and other people's funds. Banks find it so difficult to employ money advantageously nowadays that in some places they have cut interest rates. Savings deposits have risen. How are the banks to invest them? Where? No manufacturer can use the money if the electric refrigerator he makes fails to find a market. So in buying a refrigerator you help the bank, help the manufacturer, and help the worker.

Meanwhile the ice man is still delivering ice. The fact that you dispensed with him does not mean that he is idle. Other people still buy his ice, and when his customers all buy electric refrigerators, if ever they do, the ice man will be needed to help to make them or to make something else. If a modern system of refrigeration is preferred to an earlier system, the desire will be met. That is the basis of progress.

It would have been the height of folly for the men who made coats of mail to insist that something should be done to continue their line of work after the public had decided that coats of mail were no longer required. It would be equally ridiculous for the blacksmith to insist that motor trucks should not be used in transportation because their use cuts down his work of shoeing horses.

Progress is relentless in decreeing that trades, and indeed employments of many kinds, outgrow their usefulness. Then comes a change. It is one you have helped to facilitate in your purchase of a refrigerator. Society's care should be not to block economic changes, but to aid the adjustments which they entail so that mechanical gains will not mean social losses.—*Christian Science Monitor*.

BUSINESS leaders and engineers are looking for a great new industry to lead us out of the slump. An industry, it must be, to supply some new improvement in living conditions in the home—for quite obviously the homes of 29,000,000 American families provide a market bigger than all the factories, all the office buildings, all the municipalities and all the states.

Such a new industry as we have seen many times in the past—the telephone, the automobile, the washing machine, electric lights, mechanical refrigeration, most recently the radio.

Likely, it will be an inexpensive system of heating and cooling our homes. By which, automatically, we shall have heat when we need it, and cool air for the hot days of summer. . . . Air conditioning of this sort, for domestic use, is certainly not far off.—*Ladies' Home Journal*.

## An Editor on Wheels

Stories of Interesting PLACES in the Refrigeration Industry

By GEORGE F. TAUBENECK

### Association Island

For a long time it has been this writer's contention that coats and ties for men in blistering summer weather are as foolish as would be cotton pajamas for street wear in December. Moreover, it's my notion that a white shirt with open collar is one of the most becoming garbs in modern man's limited wardrobe.

It isn't difficult to understand my favorable first impression of Association Island, then, when you know that no neckties are allowed on the island.

This local ordinance is rigidly enforced, although the few violators are usually either uninformed or absent-minded, rather than conscientious objectors. Nearly everyone whoops with joy at the privilege of being kind to his throat.

Being a rabid radical, a crank, a nut, and a propagandist on the subject of sensible dress for men, your correspondent naturally feels that the no-tie law has something to do with the buoyant, carefree, masculine spirit which enters into the men who sojourn at this island.

The open throat is the first step in the unmasking of the individual, in the stripping of his formality and the dropping of his "front."

Thus liberated, the islander gets in the back-to-nature mood (in which men are invariably happy), goes athletic, lets his sporting instinct have free rein, and reveals to his fellows the Real Man which has been hiding behind his acquired exterior.

Association Island is owned by a group of General Electric men. More than two decades ago, so the story runs, a conclave of G. E. officials came to the conclusion that their men should have a common playground.

"You can't begin to know a man well until you've played with him," was the dictum. And Association Island was the result. So well has the idea worked that another and larger island is now being similarly conditioned.

During the good ole summer time, one regiment after another invades the island. Visitors confer, lay plans, rest, and play. And go home more enthusiastically loyal than ever.

Situated in the armpit of Lake Ontario and the St. Lawrence river, on the shores of New York (official address is Henderson Harbor, N. Y.), this scraggly, scrawny island cannot exactly be termed a garden spot.

In comparison with many lake islands it is almost denuded of trees. The flora is limited to marshgrass and clover, and the fauna consists almost entirely of unobnoxious insects.

Narrow, with long straggling arms extending out into the lake like the tentacles of an octopus, Association Island is about as symmetrical and proportionate as a pair of wrestlers entwined on a mat.

Yet that very narrowness and nakedness permits one of the most poignant beautiful natural scenes I have ever found.

You have seen sunsets on a lake. You have also seen moonlight on a lake. And you will probably agree with me that few of Nature's presentations can match these simple pictures. At Association Island one can witness both scenes simultaneously, one on the left hand, one on the right.

On one side is a rippling path of quicksilver cutting through the phosphorescent tranquility of the water, with the queen of the heavens riding serenely overhead.

On the other side is a mammoth blaze of pink, offset at the horizon by an endless expanse of water so richly blue that it seems unreal.

There they are, two gorgeously beautiful panoramas, each separate and distinct, yet each waiting at the same time for your dumb-struck gaze.

If one is a true pagan—sun-worshipper and moon-worshipper—one knows not where to turn. It's like being offered a Rolls-Royce on one hand and a motor yacht on the other.

But don't think this moonrise-and-sunset combination is all the island has to offer. It's so pleasant a place to spend one's days that immediately upon leaving it one starts figuring out how to get back.

Sport? Anything you want.

A six-hole golf course on the island,

and a nine-hole course on the mainland just across the bar. Two well-kept hard tennis courts.

A putting course. Good boating, bathing, and fishing. Rods and rods of beach for solitary strolls. And facilities for indoor games.

Innocent pastimes of the latter variety, such as vocal harmonizing, social conversation, dart-throwing, cards, and dominoes (the galloping variety) are quite popular.

Cool nights, an almost perpetual breeze, and the magic that large bodies of water work on taut nerves, make the island a first-class spot for rest—if one is given a chance to get it.

Rows of little huts—each equipped with two beds, a lavatory, rows of hooks, doors fore and aft, and little else—extend in several directions.

There is a mess hall, where all meals are served, and where the boarding-house reach is made a fine art. There is an administration building, which includes a post office, telegraph station, telephone booths, tables for games, and a long veranda.

Most notable is a typical New England town hall, with belfry, bell, stage, and all the trimmings. Here assemblies are held. Other buildings include a recreation hall, power house, kitchen, bathhouse, and such like essentials of a permanent camp.

Vegetables come from the island's own truck garden.

Whether it be the tonic air, the lack of responsibilities (one is well taken care of by the efficient camp staff), the perpetual holiday atmosphere, or the praiseworthy absence of ties, Association Island is a natural breeding ground for good-fellowship.

In a place like that one can't help but like the men one meets. Valuable friendships are cemented, business cooperation is made easy. Hence Association Island seems to be fulfilling the purpose of its founders in a highly satisfactory manner.

### Those Present

(Concluded from Page 4, Column 5)

Rex Cole, Inc., New York City; M. B. Mendenhall, Warde B. Stringham Co., Des Moines, Ia., and B. M. Hanley, Wheeler-Consler Corp., Cleveland.

L. C. Wheeler, Wheeler-Consler Corp., Rochester, N. Y., and C. O. Hamlin, General Electric Co., Cleveland; R. Sholl, Judson C. Burns, Inc., Philadelphia, Pa., and J. Rafferty, Judson C. Burns, Inc., Philadelphia; Cohn Convery, Judson C. Burns, Inc., Philadelphia, and Paul Lewis, Hoosier Electric Refrigerator Corp., Indianapolis, Ind. H. Welfare, Cushman Refrigeration Co., Cleveland, and Robert Sausaman, Cushman Refrigeration Co., Cleveland; H. H. Smith, the Willis Co., Akron, O., and C. R. Warren, Commercial Credit Co., Baltimore, Md.; J. Houserman, Ochiltree Electric Co., Pittsburgh, Pa., and D. H. Thomas, Ochiltree Electric Co., Pittsburgh, Pa.

G. A. Wortman, Gentsch-Thompson, Inc., Boston, Mass., and F. McGuire, Gentsch-Thompson, Inc., Boston; Frank Prideaux, Gentsch-Thompson, Inc., Boston, and C. E. Weitzel, the Hines Co., Baltimore, Md.; J. H. Wilkins, the Hines Co., Baltimore, Md., and I. B. Bricker, Ochiltree Electric Co., Pittsburgh, Pa.

E. L. Rich, General Electric Co., Schenectady, N. Y., and W. H. Dunn, General Electric Co., Schenectady, N. Y.; J. L. Knight, General Electric Co., Erie, Pa., and R. V. Burleigh, General Electric Co., Schenectady, N. Y.; P. Schlansker, General Electric Co., Schenectady, N. Y., and J. F. Eckel, General Electric Co., Schenectady, N. Y.

E. L. Wilson, General Electric Co., Schenectady, N. Y., and H. C. Ramsay, General Electric Co., Schenectady, N. Y.; L. P. Hutt, General Electric Co., Schenectady, N. Y., and H. A. Whitesel, General Electric Co., Ft. Wayne, Ind.; A. H. Ralston, General Electric Co., Ft. Wayne, Ind., and R. E. King, General Electric Co., Ft. Wayne, Ind.

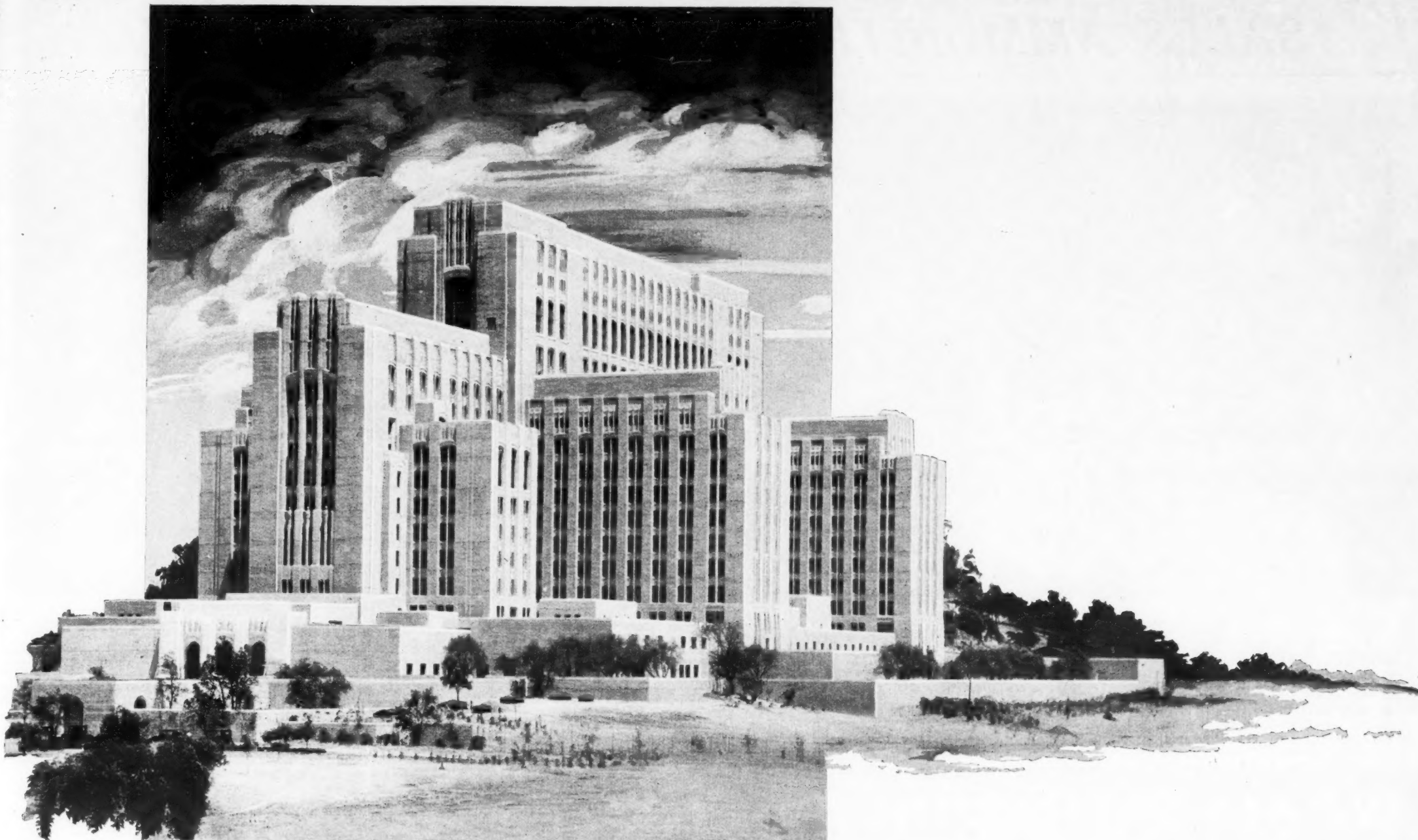
D. H. Gaston, General Electric Co., Ft. Wayne, Ind., and J. S. Cooley, General Electric Co., Schenectady, N. Y.; H. H. Bixler, General Electric Co., Schenectady, N. Y., and S. F. Newman, General Electric Co., Schenectady, N. Y.; J. J. Walker, General Electric Co., Schenectady, N. Y., and C. F. Roeder, General Electric Co., Schenectady, N. Y.

E. L. Locker, General Electric Co., Ft. Wayne, Ind., and J. P. Youtz, International G. E. Co., New York City; L. L. Lacombe, International G. E. Co., New York City, and R. Bacca, International G. E. Co., New York City; W. R. Baker, Maxon, Inc., and S. B. Egan, Maxon, Inc., New York City.

M. S. Brennon, Maxon, Inc., Detroit, and H. G. Selby, Maxon, Inc., Cleveland; J. J. Meehan, Rex Cole, Inc., New York City, and G. J. Stiffer, Rex Cole, Inc., New York City; G. B. Allison, Montreal, Can., and L. G. Bowker, Montreal, Can.

H. Rosenberg, Rex Cole, Inc., New York City, and H. H. Raphael, Rex Cole, Inc., New York City; R. M. Peters, Penn Heat Control Co., Philadelphia, and S. T. Whitbeck, Penn Heat Control Co., Philadelphia; H. D. MacRae, Page-Morris, Inc., Albany, N. Y.; Ervin Henry, Storz Electric Refrigeration Co., Omaha, Neb., and S. P. Savage, Columbia, South America, Colombia Co.





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Los Angeles

CABINETS BY

**Seeger**

SAINT PAUL

The Los Angeles County General Hospital, Los Angeles, Cal., one of the largest hospitals in the world, will be equipped throughout with Cabinets by Seeger.

This large contract was obtained by the Los Angeles Branch of the Seeger Refrigerator Company.

**SEEGER REFRIGERATOR COMPANY**

232 Fourth Ave.  
Fourth Ave. at 19th St.  
NEW YORK, N. Y.

655-57 So. La Brea Ave.  
LOS ANGELES, CAL.

Statler Building  
BOSTON, MASS.

666 North Wabash  
CHICAGO, ILL.



# SALES AMMUNITION TOPS MAJESTIC MENU



Majestic distributors received ammunition for coming refrigeration and radio sales drive at the banquet closing the recent meeting in Chicago.

## TEMPRITE WATER COOLERS PLACED IN ARMORY

WORCESTER, Mass.—John Woodman Higgins Armory, an exhibition hall, has just ordered a series of Temprite

water coolers placed in its building. The Armory attracts many hundred thousand visitors every year who come to view a visual history of the development of design and craftsmanship in steel from the early ages to the present day.

## DENVER STORE TO SELL NORGE UNITS

DENVER, Colo.—(UTPS)—The Denver Dry Goods Co. has been appointed dealer for the Norge refrigerator.

## Beer Cabinet for Boulder Dam

BOULDER CITY, Nev.—A special beer cabinet to keep kegs cold has been installed in the clubhouse erected for employees of Six Companies, Inc., working on the new Boulder dam here.

The cabinet is cooled by one DR-5 and one DR-4 General Electric units.

Other G. E. installations include 26 water coolers, one CS-602, one G-75, and 10 S-62 units.

## KING KOLD DISTRIBUTOR ORGANIZES DEALER FORCE

ST. LOUIS, Mo.—(UTPS)—The E. J. Straus Radio Co. has been appointed King Kold distributor in the St. Louis area. E. J. Straus is president of the concern and S. K. Landau, vice president.

Dealers who will handle King Kold in St. Louis for the Straus company are: Albrecht Auto Co., Bly-Moss Furniture Co., Brandt Electric Co., Crets Service Station, Hellrung & Grimm, Ideal Radio Co., Henry Kemper, Laudel Radio Co., Quality Furniture Co., South Side Radio & Service Co., General Appliance Sales Corp., University City.

Missouri dealers are: A. E. Howard, Canton; McClendon Radio Co., Clayton; Niehaus Electric Co., Ferguson; Royal Radio Co., Kirkwood; H. P. Middle-schwartz, Silex; Lemeke Radio & Refrigerator Co., Webster Groves.

Illinois dealers are: Slack Furniture Co., Alton; Slack Furniture Co., Belleville; Langenfeld Motor Co., Centralia; Earl Hestand, Cambria; J. H. Frerker, Carlyle; Slack Furniture Co., East St. Louis; Williams & Co., Edinburg; McNeill Electric Co., Herrin; Hudson-Essex Motor Co., Mt. Vernon; Emil Roquillon, Pinckneyville.

## REVERE NAMES MACFIE AS ASSISTANT SALES HEAD

NEW YORK—Donald Dallas, president of Revere Copper and Brass, Inc., has announced the appointment of C. A. Macfie as assistant sales manager of the company, with headquarters in the general sales department, 230 Park Ave., New York City.

Mr. Macfie has been in the copper and brass business since 1912, starting with the U. T. Hungerford Brass and Copper Co.

Later he became connected with the Rome Brass and Copper Co., now known as the Rome Division of Revere Copper and Brass, Inc., and was in charge of all sales to distributors in New York City and the metropolitan area.

Since the Revere consolidation, he has been manager of the merchandise sales in the New York district.

## ABINGTON FIRM WINS IN APPLIANCE CONTEST

ABINGTON, Mass.—By selling 208.03 per cent of their quota, the salesmen of Electric Light and Power Co. won an appliance contest from Brockton Edison Co. Brockton salesmen sold 199.37 per cent of their quota.

During the contest, the local company sold 116 electric refrigerators.

## 14 G. E. UNITS INSTALLED IN N. Y. HOSPITAL

POUGHKEEPSIE, N. Y.—(UTPS)—The Wallace Co. has just completed the installation of 14 General Electric refrigerators in the Hudson River State hospital.

## APPOINT TERRE HAUTE FIRM GIBSON DISTRIBUTOR

TERRE HAUTE, Ind.—Advance Electric Co. has been appointed exclusive wholesale distributor for the Gibson electric refrigerators in central and southern Indiana and eastern Illinois.

# We Are Getting the Business But We Want You to Have It!



5¢ a copy  
**Collier's**  
THE NATIONAL WEEKLY

Over 6,000,000 readers of the quick-buying class are being told about the Easy-Out through national advertising in Collier's and Cosmopolitan. Cash in on the demand we are creating for Easy-Outs by featuring them in your store, in your refrigerators and in your windows.



No water is needed to remove the ice from the Easy-Out. Just press down sharply on ends of grid. Lift out the grid and twist or flex it. Out comes the ice in the newest shape—ICE BARS.



This attractive counter display will help you sell the Easy-Out. It has a stand on which you can put a tray that customers who enter your store can try themselves and see it work.

NATIONAL ADVERTISING is directing millions of readers to you to buy the Easy-Outs. But so many have been unable to find Easy-Outs in their localities that they have sent thousands of checks, cash and orders for C. O. D. shipments direct to us.

We are not in the retail business. We do not want to be. We want you to have this business and make the profits.

Our advertising is directing buyers to you. If they can get Easy-Outs from you, they will have no need to send their orders direct to us. And because we know that you can do a far better job of selling than we can from long range, we want you to form the background of our distribution system.

Send for a \$1 trial tray today and let the Easy-Out prove itself in your own refrigerator. Then order a good supply and be ready for the customers whom our national advertising is directing to your store.

# Easy-Out

ALL-METAL TWIN ICE TRAY

FOR ALL POPULAR  
MAKES OF ELECTRIC REFRIGERATORS  
Out Comes the Ice in a Jiffy Without Holding Under Water—Ice in the Newest Shape—BARS—Faster Freezing—Quicker Cooling of your Drinks

## PERSONAL TRIAL TRAY FOR \$1

All dealers who write us on their own orders or letterhead as proof of bona fide interest in refrigerator selling will be sent a personal trial tray for \$1. Number limited to one tray per customer. Please give size of tray you are now using and make of refrigerator, when ordering.

# M'CORD

RADIATOR & MFG. CO.—DETROIT, MICH.

## BOSTON STORE HANDLES LIBERTY REFRIGERATORS

BOSTON—Liberty electric refrigerator, now being handled by the Houghton & Dutton department store, is a product of the Liberty Tool & Gage Works, Inc., of Providence, R. I. The cabinets are made by Seeger Co. of St. Paul.

At present the Houghton & Dutton store is featuring a small model which sells for \$119. All models are sold on the payment plan. This particular model is offered on the \$10 down plan with one year to pay the balance.

Other models sell for \$129, \$139, \$149, \$159, and \$179. The two door models sell for \$188, \$198, and \$219. There is also an 8 ft. deluxe model which sells for \$319.

The \$119 model has a 6 cu. ft. total capacity. It has a cold control that may be regulated to three different freezing degrees. The cabinet is all steel, with white Duco exterior finish.

The main distributor is Houghton & Dutton Co. Post & Lester of Boston is also a distributor. The line is handled almost exclusively in New England, although it does have distribution in Canada.

## R. G. RUST ACQUIRES BRANCH AT BRIDGEPORT

BRIDGEPORT, Conn.—The Bridgeport branch of the Downes-Smith Co., Stamford, Frigidaire dealer, has been acquired by R. G. Rust, New Haven dealer, it is announced.

A. F. Becker has been manager of the Bridgeport branch of Downes-Smith for several years. Mr. Rust took over the Frigidaire business in New Haven from a factory branch less than a year ago.

## REALISTIC DISPLAYS, INC. MOVES OFFICES

NEWARK, N. J.—Offices and factory equipment of Realistic Displays, Inc., designer and manufacturer of advertising sculpture, have been moved to 122-124 Colt St., Irvington, N. J.

The sales during the first six months of 1931 were triple the sales for the same period in 1930, according to S. Jay Goldstein, general sales manager.

## CLEVELAND COMPANY WILL DISTRIBUTE STARR FREEZE

CLEVELAND, Ohio—Modern Household Supply Co. has obtained a dealer franchise for the Starr Freeze electric refrigerator through the direct factory distributing organization of the Starr Co. refrigeration division.



## DISTRIBUTOR DEVICES FOLLOW-UP SYSTEM

By Mildred Sullivan

PROVIDENCE, R. I.—C. & K. Electric Co., distributor for Westinghouse electric refrigerators, keeps two visible steel files which hold the names of 1,500 live prospects.

"Live for the reason that there is no name in that file over one month old unless the prospect has given our salesman encouragement," explains Irving I. Coken, president. "For that reason our prospect list is worth real money because every name in it is active."

"Once each month, unless the prospect has set some definite date in the future, each name is followed up by some one of our 30 salesmen who are on the road all the time. Each salesman is given certain cards for follow-up, these cards of course being those of prospects he has contacted. Each card gives the person's name, address and other sales data which keeps the facts of each particular case fresh in the salesman's mind."

### Cards Returned Daily

"At the end of the day, the cards are returned to the sales supervisor with the notation of day's visit which gives us the value of that prospect. One card, for instance, may be marked, 'Good prospect. Husband working out-of-town. Call back October 10', while another may comment, 'Not interested'. From these comments, the sales supervisors weed out the dead leads."

"Our entire sales force is handled by two sales supervisors who in turn are under the charge of our treasurer, W. L. Kelman. The sales work is so planned that our 30 men visit in turn all homes in the city of Providence and near-by cities and towns."

"Leads are taken largely from the telephone book which gives us," he said, "our best general list of home owners and family heads. Each morning a salesman is given a mimeographed form on which are listed the names, addresses, and telephone numbers of the prospects he is to follow up that day."

"At the end of the day's work, this sheet, carrying the salesman's name and the date, is returned to the sales supervisor with remarks pertaining to each name."

### Fill Out Questionnaire

"Approaching the prospect, our salesmen have a definite purpose which makes our visits different from the average salesman's 'line,'" Mr. Coken explained. "He asks definite questions concerning the prospect's present refrigeration—type, cost, shelf space, condition, cost of ice, loss of food when using ice, and such."

"This is filled in on a blank questionnaire form, one being provided for each prospect. An appointment is then made when the salesman may call again to talk with the wage-earner, and show this questionnaire filled in to give comparative costs for Westinghouse electric refrigerators, showing comparative savings. These second visits clamp a good many sales for they stress savings, and both members of the family are 'sold.'"

### STAFF CHANGES ANNOUNCED BY R. G. RUST

BRIDGEPORT, Conn.—Thomas H. Draper has been named manager of the Bridgeport branch of R. G. Rust, Frigidaire dealer with headquarters in New Haven. Mr. Draper, who was formerly sales supervisor at the Rust New Haven store and prior to that affiliated with the Frigidaire factory branch in the same city, succeeds A. F. Becker, who has resigned.

Samuel Levine, former New Haven service manager for the same concern, has succeeded Kenneth D. Woundy in the service post at Bridgeport. Mr. Woundy, who was associated with the Bridgeport Frigidaire dealership when it was operated as a division of Downes-Smith Co., Stamford, for a number of years, recently resigned to become service manager for Electric Refrigerator Sales, Frigidaire dealer in Elizabeth, N. J. Mr. Woundy will have charge of service in Elizabeth and Hackensack.

### REX COLE SHOWROOM OPENED IN BROOKLYN

BROOKLYN, N. Y.—Another Rex Cole showroom building was officially opened to the public on August 12, with corporation officials, and more than 100 Bay Ridge salesmen in attendance. The structure, located at Shore Road and Fourth Ave., is valued at \$50,000. Approximately 300 residents of the community visited the showroom the first day.

This is the first of several new General Electric showrooms to be opened by Mr. Cole in this borough during the next few months.

### STARR FREEZE DISTRIBUTOR

LINCOLN, Nebr.—Starr Freeze electric refrigerators are being distributed in 30 counties of Nebraska by the Central Radio Co.

## Cool Drinks For Pedestrians



O. C. Endress, Dayton Frigidaire retailer, gives the public a cool drink.

## MILWAUKEE FIRM SELLS ODOR ABSORBING PRODUCT

MILWAUKEE—A new product known as Sanz, which absorbs and destroys offensive food odors in ice boxes and refrigerators, has been introduced by the Sanz Corp. of Milwaukee. It will be sold through dealers—in a container which retails for 50 cents.

The housewife places the individual container on the top shelf of her refrigerator. At that point, rising air currents pass over it before going into the cooling system for re-circulation. Odors carried by the moving air are absorbed by the package of Sanz, and the air is purified before it continues around the circuit.

Sanz is odorless, but its peculiar chemical composition enables it to absorb "smells" which come in contact with it.

## CHICAGO FIRM DISTRIBUTES KING KOLD REFRIGERATORS

CHICAGO—Young, Lorish, and Richardson, with display rooms at 710 West Jackson Blvd. here, has taken over the distribution of King Kold refrigerators for the Chicago territory, according to an announcement made by Sam Molner, sales manager for the Illinois Moulding Machine Co., manufacturer of the King Kold line.

The Straus Radio Co. of St. Louis will handle the distribution in that territory, Mr. Molner stated.

Announcement of distributors for New York and other eastern states will follow shortly, the announcement brought out. The present production schedule is still behind the order demand, Mr. Molner said.

There are five models of the King Kold line manufactured at the present time, the models coming in 5, 6, 7, 8, and 9 cu. ft. sizes.

## MAJESTIC LINE DISPLAYED IN THEATRE STYLE SHOWS

SAN FRANCISCO—Majestic radios and refrigerators share honors with pretty show girls in the Fox chain and the Gold State circuit of theatres in San Francisco and Oakland, as Thompson & Holmes, Ltd., Majestic distributor, focus attention on these products by means of theatre lobby displays.

The Majestic style shows present the three models in the refrigerator line, and six in the radio line.

## GENERAL ELECTRIC DEALER HOST AT STAG

DAYTON, Ohio — (UTPS) — Water sports and foot races featured the two-day outing given for the employees of the R. R. Hollister Co., given by R. R. Hollister, general manager of the company at Indian Lake, Aug. 15 and 16.

All men employed by the company selling General Electric refrigerators were in attendance and the Island View hotel leased for the two days during the outing. The committee in charge was composed of George Wood, W. L. Clark and H. A. Ritter.

## Cool Air for Jewel Auction

MT. CLEMENS, Mich.—R. E. Boyer, who operates a local jewelry store, picked up his newspaper on a hot day recently and read that Copeland Products, Inc., had brought out a room cooler.

Mr. Boyer was conducting an auction sale and it was so hot in the store that people would not remain long enough to buy. So he telephoned the Copeland factory to bring down a room cooler and install it at once.

The result was a temperature of about 20° less in the store and the customers remained long enough to make their purchases.

## WERLEIN'S STORE OPENS KELVINATOR DEPARTMENT

NEW ORLEANS—Philip Werlein, Inc., distributor of Kelvinator electric refrigerators, recently opened its new Kelvinator department. There was orchestral music, refreshments, and souvenirs.

A feature of the opening was a huge sign covering three stories of the store and 45 feet wide, telling of the \$20,000 comparison contest.

Werlein's has been in the music trade 90 years in New Orleans. Philip Werlein, Inc., first published the song, "Dixie."

In the rear of the showroom is a completely equipped model kitchen, presided over by Miss Ruth W. Oswald, home economist. She is an experienced electric refrigeration economist.

The president of the company is J. P. Werlein and P. S. Felder is vice president and general manager. Tom Reddick, an old employee of the company, who has made a record in piano

## HARVARD USES DATA ON ELECTROLUX LOAD

CAMBRIDGE, Mass.—Data collected by E. J. Devlin, research engineer of the Brooklyn Union Gas Co. will be studied by students in the Graduate School of Business Administration of Harvard University.

School authorities, having obtained a report on the subject prepared by Mr. Devlin some time ago, sought from him additional information. This information has been used in framing a problem which the students will be asked to solve.

Briefly, the problem will be that of determining whether a gas company would be justified in expending much money in attempting to build up a refrigerator load.

If their answer is in the affirmative, they will be expected to suggest the best means for extending the use of these appliances.

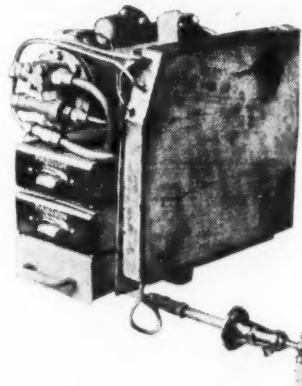
In working up a problem based on Mr. Devlin's findings, the school is following its established policy of undertaking the solution of actual industrial and commercial problems.

## DEPARTMENT STORE TO HANDLE ICE-O-MATIC

BRIDGEPORT, Conn.—The Leavitt Co., central department dealer for Ice-O-Matic refrigerators. The Oscar B. Eertilson Co. is key dealer for the Bridgeport area, while the Plymouth Electric Co., New Haven, is state distributor.

and radio selling, is in charge of the Kelvinator department. R. M. Knight is in charge of commercial sales, and Flint Wilson is advertising and sales promotion manager.

# FOUND...



The missing link in electric refrigeration's chain of progress—

Fresh, Cold, Pure, Healthful Running Water for Everybody

## THE EVERS HOME WATER COOLER

answers the demand of the hour for a domestic pressure type water cooler at a low first cost, at practically no additional operating cost.

"Your Home Water Cooler on my B-9 Frigidaire has transformed it into the most up-to-date refrigerator in Texas," says R. J. Turrentine, Director Department of Philosophy and Education, Texas State College for Women.

### OUTSTANDING FEATURES

1. Pressure type, eliminating bottles, pans and to a large extent the necessity for ice cubes.
2. Is inside the cabinet and requires no insulation; no extra current for heat leakage.
3. Fits between freezing coil and cabinet wall, taking up no extra space.
4. Does not interfere with the regular operation or temperatures of the refrigerator.
5. Uses little if any additional current.
6. Furnishes one-half gallon of water cooled thirty degrees every ten minutes.
7. Cold water may be had without opening door.
8. May be shut off in winter by the turn of a valve.

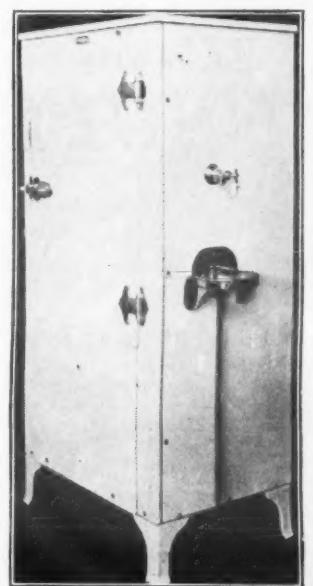
The EVERS HOME WATER Cooler uses and depends upon the American Thermostatic Expansion Valve, the valve being duplexed or paralleled into the system without disturbing the original set-up.

This valve has been in use for two years in thousands of commercial installations protecting great quantities of valuable merchandise. You may rely upon it to supply cold water at a definite set temperature in your household refrigerator.

The EVERS HOME WATER Cooler comes in kit form and is comparatively easy to install. For all standard Frigidaire, both new and old, the price of the kit complete with bibb and monel drip basin is

\$47.50 F.O.B. Denton, Texas

**EVERS HARDWARE COMPANY**  
DENTON TEXAS  
Established 1885





Little Stories of Interesting  
PEOPLE  
In the Refrigeration Industry

# THE EXPANSION VALVE

By George F. Taubeneck

Little Stories of Interesting  
IDEAS  
In the Refrigeration Industry

## Zupke and Little Joe

Joe Donovan, director of G. E. apartment house sales, claims he doesn't know Bob Zupke.

In case you're in the same boat with Joe, we hasten to identify the Dutch Master as head football coach at the University of Illinois, as an artist whose paintings have won honors at many exhibitions, and as one of the best-paid and most sought after-dinner speakers in the country.

Zup speaks with a pronounced high German accent. His lingo in itself is amusing, but with it he combines involved philosophical discussions (which come from nowhere, get nowhere, and end nowhere) and tall yarns in a bewildering fashion that usually ties his audiences in knots.

One of Zup's best-known stories is one about the bumblebee which was swallowed by a cow. He may not have invented it, but he has told it so many times that it is undeniably his. It's sure-fire wherever he goes.

Perhaps you are wondering what all this has to do with Joe Donovan. Well, it was like this:

Joe was a solo performer in the "Trivialities of 1931," presented last Friday night for the edification of G. E. distributors at Association Island.

An accomplished dialectician, Joe told the story of the cow and the bumblebee, and told it in the lingo of an emigrant from the Fatherland.

One could shut one's eyes and visualize Bob Zupke himself up there on the stage. But Joe, as we



"Little Joe" Donovan gets chesty.

have said before maintains he has never heard Zup.

At any rate, it's a helluva good story, no matter which one relates

it. Ask the G. E. distributor in your territory to tell it to you.

## Mahony Speaking

Another G. E. headquarters man who evoked whoops of joy from the assembled islanders was Mike Mahony, who donned judicial robes Thursday night and conducted the initiation of the rookies (those on their first trip to the island).

We have heard that all good humor is repertoire. But if ever we've heard spontaneous wit, we heard it that night from "Da Big Mick" who directs G. E. refrigerator sales.

No matter what happened—and plenty did—Mahony was equal to the occasion. Ahead of it, in fact.

His quips were the sort that cannot be divorced from the situation or the man, and hence cannot be retold effectively.

How we wish they could be passed on to you! The reputation of this kolyum would be established for life if we could do it.

## The Clown Prince

Notwithstanding the fine performances of Donovan and Mahony, Harry Mealey was probably the best clown of the whole show. He appeared in almost every skit throughout the meeting, and gave several extemporaneous exhibitions. All were first-class.

Perhaps his best performance was given Thursday night when he acted as the dummy for ventriloquist Syd Caswell (Detroit distributor).

On Syd's wobbly knee, clown Mealey projected himself into as many stiff angles as the dancers on an Egyptian frieze.

Save for a couple of breaks, he maintained a painted doll mask on his face that was even more ludicrous than his mechanical movements.

Incidentally, Mr. Mealey was manager of Camp Refrigeration V. He had plenty of things to manage, and so far as we know, he didn't miss a single shot.

## Crooning Daily

That versatility and ability to be all things to all men at all times did not rest alone with Mike Mahony and Harry Mealey.

Other Cleveland headquarters men were equally surprising in the readiness with which they took to the roles of entertaining cut-up men.

They shook off their dignity and sobriety as easily and gracefully as a deb slips out of an evening wrap.

No one would suspect, for instance, that hard-driving, business-like, intense Walter Daily could croon. He can, and did.

As the basso profundo of a quartet—which also included the ever-present Harry Mealey, the talented young E. H. Norling, and G. C. Wasson—he helped croon sentimental ballads a la Vallee in a manner which might have evoked sentimental sighs had not his burlesque gestures and after-beat knee rhythm been so comical.

Yes, sir. Daily a Punchinello.

You wouldn't believe it if you hadn't seen it.

The quartet performed not only before the footlights, but informally, around the tents. Its early a. m. renditions were even better, from the standpoint of close harmony, than those given from the stage.

## More Talent

Several months ago, following the Monitor Top convention in Cleveland, the Valve turned dramatic critic and fired a few salutes of applause for Julia Grosscup and E. H. Norling of the G. E. headquarters staff. They were, we thought, actors of genuine promise.

Norling turned up again at Association Island, and again demonstrated histrionic talent. As first prosecuting attorney in Walter Daily's trial of Old Man Quota, he rang out denunciations with verve and gusto. We like his voice.

M. T. Bard, as defense attorney, also did a bang-up, two-listed job.

A. L. Sweeney, production manager, stirred things up as the cop in Mike Mahony's amateur night (rookie initiation).

Nobody would mistake Sweeney for anything but an Irishman, and in a helmet and brass buttons he looks more like a "harness bull" than most of Chicago's department of uniformed millionaires.

Paul Dow, professional pep-man, was the moving spirit behind most of the contests and games. Often the ice-breaker at gatherings is greeted coldly by many, but not Paul. He has an infectious enthusiasm, and is one of the few young men in captivity who can poke a couple of hundred assorted men in their collective ribs, start them moving, and make them like it.

## Noses on the Grindstone

Some of the other officials from Cleveland either had no aptitude for the stage, or were too busy sawing wood to do any clowning.

Gus Mayer, merchandising manager, worked hard putting over the story of the presidential campaign contest, which he is to direct.

H. H. Bosworth, smiling, white-haired utility division manager, could be seen talking with a group at any moment of the day, as could Al Uhalt, dark visaged boy whose pronounced accent is most persuasive.

Along with quiet Bill Timmerman, Commercial Division Manager Walter Landmesser did a great deal of conferring and planning. He looked like the Cheshire cat that had just swallowed the cheese, and seemed to have recovered fully from his recent indisposition.

Frank Corliss, always the busy man, found much to talk about with engineers from Schenectady, Erie, and Fort Wayne.

Conspicuous among his confreres were J. L. Knight of Erie, and R. W. Ayres of Schenectady, A. S. R. E. golf champion.

Chris Steenstrup, the Grand Old Man who is given a lion's share of the credit for designing the G. E. refrigerating machine, took the plaudits showered upon him philosophically, as is his wont.

From Manager P. B. Zimmerman the Valve extracted (yup, it was just like pulling a tooth) a companion story to the biographies of Mr. Biechler and Col. Smith already printed in this kolyum. It will appear in the next issue.

"Zim" probably saw more men and transacted more business than any man at the camp. He was never alone, never idle, indulged in no recreation.

Now a vice president of the General Electric Co., T. K. Quinn reflected in his talks something of the expanded scope of thinking his new job is requiring.

He seemed carefree, and nobody laughed more heartily at the stunts and quips, yet one who watched him closely might have suspected that something was on his mind.

## Cyrano de Bergerac

Into Walter Daily's cabin Friday night came Lou Maxon (whose advertising agency has the G. E. refrigerator account). Maxon was looking for Quinn—said there was a passage in *Cyrano de Bergerac* he wanted to show him. Not finding his man, Maxon made an exit.

*Cyrano* is an old favorite; we have read it and reread it many times, in the original and in translation. Rostand's famous drama contains, we think, some of the most eloquent speeches in all literature.

Hence our curiosity was aroused. Just which of *Cyrano's* passionate avowals did the advertising man think would especially interest the General Electric vice president? Just for fun, we'll try to answer the question for you. If this isn't the passage, it should be:

I carry my adornments on my soul.  
I do not dress up like a popinjay;  
But inwardly, I keep my daintiness.  
I do not bear with me, by any chance,  
An insult not yet washed away—a conscience  
Yellow with unpurged bile—an honor frayed  
To rags, a set of scruples badly worn.  
I go caparisoned in gems unseen,  
Trailing white plumes of freedom, garlanded  
With my good name—no figure of a man,  
But a soul clothed in shining armor, hung  
With deeds for decorations, twirling—thus—  
A bristling wit, and swinging at my side  
Courage, and on the stones of this old town  
Making the sharp truth ring, like gold spurs!

## Men of Maxon

At the island, each man was assigned a bed in one of the "tents," which weren't tents at all, but small huts, or cabins, or compartments in a wooden "long house." Two men occupied each "tent."

The Valve was assigned to "tent" No. 92. Fred Bollmeyer, a Maxon man, was the other occupant. Outside of the fact that he snores in 14 different minor keys and in seven languages, Fred was a capital roommate.

He comes from a family of newspaper men, has been one himself, and still retains that adventurous, what's-next spirit.

He can go without sleep for 36 hours, work hard, play hard, and still look like the leading man in a Broadway hit, still be affable and suave, still refuse to become irritable or ruffled. It's an art.

Fortunately or unfortunately, Fred has a lot of friends. They like to drop in on him. Hence our two-man coop could often be mistaken for a hotel lobby. Even at 3 o'clock in the morning, tra-la.

Among those present one could usually find most of the Maxon gang. There were M. S. Brennon from Detroit, for instance, and S. B. Egan, a keen-eyed veteran from the New York office.

And from the Cleveland office came W. R. Baker, "Charley-My Boy" Hayes, and H. G. Selby, who struck the Valve as being a very personable fellow.

No aloofness or clique-iness about that bunch. Immediately upon being presented, they acted as if they had played mumblety-peg in your backyard as kids, and welcomed you into the circle as a long-lost brother who had just returned from the grip of dat ole daval, sea. And the Valve liked it.

## Distributors Scrutinized

Flung for several days smack dab in the middle of 61 distributors of electric refrigerators, including several large-scale operators who have made real coin out of the business, the natural impulse of your reporter was to try and find the common denominator, that "priceless ingredient" in the make-up of these men who had distributed, in four years, a million units of a high-priced specialty article.

At every meal we talked with (rather, listened to) a different group. We stood under the stars at night with serious-minded little knots of distributors. Later we sat in on card games with some of the less serious of their colleagues.

At the morning general sessions, in the afternoon specialized conferences, with the evening entertainments, we observed, noted, and compared the statements and comments and reactions of these men.

From this little study, your humble correspondent can draw a single conclusion: there is no common denominator, there is no magic formula, there is no distinguishing characteristic.

They were all ages and all sizes. They were polished, rough, quiet, assertive, retiring, boisterous, dignified, informal, yes-men, no-men, playboys, hardshells, cut-ups, sticklers for propriety, men-of-the-world, hinterlanders, athletic, anemic, capricious, stolid, plodding, brilliant.

Very few of them agreed on anything. Committees presented reports and recommendations. Listening distributors had a dozen other ideas.

"It may be all right down there, but it won't work in my territory . . . Yes, that may be true, but this scheme of mine will bring in 10 orders where that one of yours will bring in one . . . Sure, we tried that last year, but we've got a better idea now . . . Of course you fellows have got a different situation, but just the same . . ."

With your kind permission, we're going to draw a few names out of the hat and present thumb-nail sketches of some of the distributors we met at Association Island.

These men are chosen for no particular reason other than that they illustrate the diversity of types, and that their faces happen to pop into the phantasmagoria stream (memory to you) at the late nocturnal hour during which this is being written.

## Big Boy Stringham

First one up is Warde B. Stringham, distributor in Des Moines, Iowa, out (Concluded on Page 13, Column 1)



55,440,027

## INDIVIDUAL MESSAGES

ARE HELPING TO SELL  
THE CABINETS INSULATED  
WITH  
**INSULITE**  
the Wood-Fiber Insulating Board



## THIS INSULITE CABINET SEAL

This attractive metal seal, finished in blue antique silver, is furnished to you in any quantity without cost, and is visible evidence that efficient and enduring insulation has been built into that cabinet. May we send you a sample of this seal.

## ENGINEERING SERVICE

The Engineering Department will gladly assist you in analyzing your insulation problems. Complete laboratories and a very large staff of experienced Refrigeration Engineers are at your service. There are no obligations. May we send you samples and additional information.



**THE INSULITE CO.**  
1200 Builders Exchange, Dept. 30H  
Minneapolis, Minnesota  
Offices in All Principal Cities

**INSULITE**  
the Wood-Fiber Insulating Board

FOR Efficiency and Economy be sure your refrigerator is insulated with Insulite—that's the message which is being repeated to the American public over 55 million times during 1931. National magazines with a combined circulation of 55,440,027 are constantly pounding home the fact that Insulite is a more efficient, stronger, and enduring insulation.

If you are one of the many refrigerator manufacturers who are now using Insulite, let your customers know about it. Display the Insulite Seal in your cabinet. It will build confidence in your product and help close the sale.

In addition to its well known thermal insulating efficiency, Insulite is odorless and will not attract odors; it has durability, long life, structural strength, and lightness in weight; it is chemically treated to resist moisture, and is rot and mold proof. Insulite is furnished cut to size ready to install, which reduces your labor costs and speeds up production.



Little Stories of Interesting  
PEOPLE  
In the Refrigeration Industry

# THE EXPANSION VALVE

By George F. Taubeneck

Little Stories of Interesting  
IDEAS  
In the Refrigeration Industry

(Concluded from Page 12, Column 5)

where the West begins and where the tall corn grows.

He is easy to remember because he was the biggest man on the island, and because he was the first man I saw when we were debarked at the uncivilized hour of 5 o'clock in the morning at Adams, N. Y.

Stringham used to play center on the Utah University football team. He must be at least 6 ft. 6 in. tall, and has a head, shoulders, chest, fists, and feet to match that height.

On a Pullman car his only hope is the aisle. He has a strong nose, black mustache, black hair, and a serious expression.

Long and patiently he will argue, never giving up until he has amassed additional arguers in numbers so great that his adversary either is subdued by the numerical strength of the opposition, or he himself is forced to retire from the battle. But he doesn't like to quit.

Like many very large persons, he is regularly and habitually good-natured.

## Phightin' Phil Harrison

Distributor at Newark, N. J., Phil Harrison is a boy who has never "grown up." Perhaps that's the reason he loves a fight so well, why he has no conception of what it means to quit, why he is so loyal.

Nobody has ever told him that you can't beat the game, and he continues to regard life as a big arena in which he is pitted against one adversary after another. And he knows darned well he can lick all comers.

He's an India rubber boy—bounces right back up after being knocked down.

Let me tell you a little of his story, as it was told to me. Five years after he was married he was down for a count of nine. He had invested all he had in time and money in an electric bulb factory in Newark. It passed out from underneath him.

He heard about an opportunity to distribute the new General Electric refrigerator.

Quickly he persuaded an acquaintance to invest \$10,000 in the project, on a 50-50 basis. It wasn't long before this first partner had to sweeten the pot with \$5,000 more.

Deciding to withdraw, he gave Harrison a 24-hour option to buy him out for his investment, \$15,000. Phil raised the money.

A year elapsed, and another partner got cold feet. Again young Mr. Harrison went out to raise money. This time he secured \$5,000 apiece from each of seven men.

Phil now controls more than 51 per cent of the business, which embraces 12 counties in New Jersey and a part of Pennsylvania, serves a population of 2,000,000, has more than 150 dealers, and operates four branch stores.

Informal as a collie dog, he has as much life and energy. His courage as a gambler is almost celebrated. And because he hasn't any thought of reaching that stage of beginning ossification known as "adult," he is loved by a regiment of conferees.

Our last mental picture of him is a dandy. We were in the baggage car of the special train which was taking us away and home. There were sandwiches and pears and ginger ale in abundance.

The brown, boyish head of Phightin' Phil appeared, and he made a bee-line for the food.

Stuffing his already rotund bosom with sandwiches, he made a basket of his arms and loaded himself up with pears and ginger ale. He ate nothing, but just made a collection, and turned back for the door.

"Not hungry are you, Phil?" he was asked, amusedly.

"Nope," he replied, simply. "Bunch of my boys are back here a-ways. Got to feed my flock."

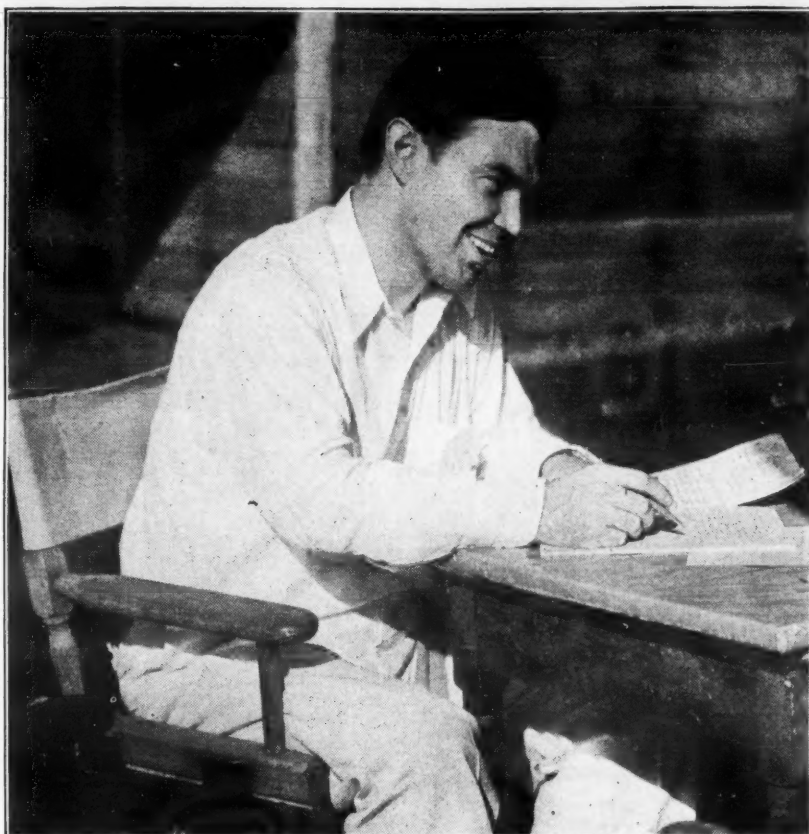
And he trudged out with his load of provisions.

## 'My Pal' Dunning

Watchword of the island was "my pa-a-l." It was uttered on any and all occasions, for no good reason at all. It was introduced by A. S. Dunning, Duluth, Minn., distributor.

He used it so effectively and so frequently during the first day of the camp that the cry was taken up all over the island thereafter.

## 'Jesse' James Writes Home



L. D. James, popular St. Louis distributor, takes his pen in hand.

Dunning has a long-faced-Christian phiz, and makes you laugh by the soulful lugubriousness of his expression. He is a typical sad-faced comedian.

Long, lanky, loose-jointed, he always reminds one of the ploughman homeward wending his weary way.

His propensity for music came to light the first evening after dinner. Lieut. Sutherland's military band was then playing lively popular airs just outside the mess hall.

Dunning gravely stepped up, relieved Lieut. Sutherland of his baton, and directed the band. He waved, gyrated, wriggled like an eel, and wound himself all up like an acrobatic soft-shoe dancer.

Then he sang the chorus of "I Found a Million Dollar Baby in a Five and Ten Cent Store," with band accompaniment. Ruth Etting couldn't have done more.

The next day he found a large harmonica. He was never parted from it. When the band marched, he marched with it, looking like the center figure in the Spirit of '76. When the band played, he played. At any odd moment, he would pipe up with a few chords. Serious as a parson, too.

## L. D. James

One of the best-liked men at the camp was L. D. James, St. Louis distributor. He is a sincere, straightforward, earnest, agreeable man whom one instinctively trusts and respects.

Well poised is his dark head, well carried are his shoulders, beaming is his smile.

He worked hard, collected all the information he could, discussed moot questions with fervor, greeted friends warmly, enjoyed himself thoroughly.

And he is going back with some very definite ideas of what he is going to do next.

## Rex Cole

Daddy of them all was Rex Cole. His private yacht was anchored just off the island. An album of pictures of his display rooms was on a table in the administration building. Figures on his monthly billings, on various phases of his operation, were whispered about with considerable awe.

Distributor of G. E. refrigerators for metropolitan New York, he is probably the largest distributor of electric refrigerators in the world.

Among the ingredients in his success formula are thorough and efficient organization, getting public attention by heavy advertising and clever stunts, keeping his salesmen at top speed by the use of a multiplicity of contests and prizes.

In the last Expansion Valve was printed a picture of Rex Cole with his champion elkhound, Hector. That was a good picture. Another representative likeness appears on page 19 of this section. Mr. Cole is elderly, alert, kindly, keen, and gentlemanly.

With him were some likely junior executives. We noted especially E. H. Campbell, distinguished-appearing sales promotion manager, John Hewlett, youthful publicity director, and Paul Hitchborn, retail sales manager whose wide grin and frank countenance made him popular with all.

## Cooper Uncooped

One links the names of Rex Cole and Dick Cooper as naturally as those of Pat and Mike, Amos 'n' Andy, Damon and Pythias. Cooper is Chicago distributor, and also has a whopping big business.

Like his friendly rival in New York City, Cooper's strong point lies in his ability to organize.

His well-controlled retail outlets, his model stores, and his magnificent showrooms are but external indications of the efficiency and magnitude of his operation.

The first time I came in contact with Dick Cooper, I thought him the most carefully groomed man I had ever seen. Neat as a kitchen in a Dutch Cleanser advertisement, he had ambassadorial presence and ease of manner.

At the island he was another man. Tousled hair, an impish grin, wearing a ludicrous polo costume, cutting capers all over the lot, he was just a bit reminiscent of Charlie Chaplin.

He came to Camp Refrigeration to play. Like he does everything else, he did the job up brown.

## Judson C. Burns

It seemed to us that the man most loved by his own organization was Judson C. Burns, Philadelphia distributor. His men always ate at a table together, and they awaited his arrival as anxiously as if he were the father of each.

To him were paid marked respect and deference, although it was clear that the attitude of his men was not one of fear, but of affection.

Mr. Burns is bald, wears glasses, talks in low tones, has the repose of age and the calmness of experience.

He knows how to flatter adroitly, and does all he can to give his men pride, to make them feel essential and important.

His efforts pay big dividends in loyalty.

## That Man from the South—L. J. Spiers

From Greenville, South Carolina, came L. J. Spiers, whose distributorship is named the H. & G. Refrigeration Co.

A dashing figure, he has all the characteristics of the southern boy, from the drawl to the happy-go-lucky spirit.

Small, slight, wiry, he was the principal figure in the polo match. He can also do a mean tap dance, sing, and tell stories.

He is a recent newlywed, and enjoys being joshed about it. If he had any cares at all, he left 'em home in a filing cabinet.

## Sunset and Climate

From the golden lands of the Pacific Coast came the three musketeers, Bauder, Belsey, and Bennett. Came also their buddies, H. H. Courtright of Fresno, Calif., and Harold D. Laidley of Portland, Ore.

George T. Bauder, distributor in San Diego, and George H. Belsey, distributor in Los Angeles, bunked together.

Bauder is dark mustachioed, wears shell-rimmed glasses, is healthy and hearty. Belsey is gray, open-faced, boyish, pleasant. Both presented fact-cramped reports to the sessions, reports which were much discussed.

L. H. Bennett, San Francisco distributor, is a smaller, livelier man than the other two musketeers. He also is gray-haired, has bright eyes, doesn't say much, but hears everything. With him came Harry Falkell, commercial manager and playboy extraordinary.

Mr. Courtright is a well-built, dark man with a deep voice and a straight, sizing-you-up-in-a-glance look.

Laidley is young, seemed tired while at the camp, has a tenor voice of considerable range and power—which he kept under cover until the tail-end of the last dinner on the island. He was formerly Dick Cooper's right-hand man.

## Out of the Hat

R. T. Bard, of Bard-Barger, Inc., Columbus, Ohio, looks like a schoolboy. Likewise John Breckenridge of Breckenridge, Inc., Springfield, Mass. Like Spiers of South Carolina, Breckenridge is a newlywed. He was homesick the first day.

As mentioned before, Syd Caswell of Caswell-Stull, Detroit, is a first-class clown. Some of these days we'll tell you more about him. An excellent likeness of Syd appears alongside that of Rex Cole on page 19 of this section.

L. T. Milnor, Cincinnati distributor, is a soft-voiced, mild-mannered gentleman with silvery hair and a benevolent expression. He bought some tickets for the Refrigeration Sweepstakes, one of Paul Dow's stunts, just because "the boys" wanted him to do so. His was the winning ticket and, chuckling, he pocketed a fistful of \$20 bills.

The aggressive Milwaukee distributor, E. H. Schaefer, is as German as his home city. He is spare of build, has dark hair and a mustache, moves quickly and nervously, has a dry humor which pops out on occasion.

Dan Willis of Akron, Ohio, looks his part about as much as anyone in the group of 61. He is tall, big-boned, speaks as one with authority, talks business constantly, has the bearing and attitude of one who expects service and gets results.

Among those who attended strictly to business none were more assiduous and arduous than S. G. Trainor and L. L. Stacy of Modern Home Utilities, Inc., Waterbury, Conn. They were up there to get ideas, with wide-open minds. Proud of their record, they were "in training" to better it.

Many, many others there were who impressed us. We'd like to talk about them in this kolyum, and some day we will; but this story must end P. D. Q., or we'll be printing it in the margins in agate type. Selah.

# REFRIGERATION DEALERS . . . . .

ask us HOW?  
ask us WHY?

Profits are Greater  
when you sell  
**TEMPRITE**  
COOLERS



Not an Experiment

Temprite Cooler Installations showing its wide variety of uses:

Staley Starch Co., Decatur, Ill.  
Y. M. C. A., Washington, D. C.  
Fifth Ave. Realty Bldg., Moline, Ill.  
First Church of Christ, Scientist, Detroit, Mich.  
John Woodman Higgins Armory, Worcester, Mass.  
Telegraph Bldg., Harrisburg, Pa.  
Quencho Root Beer Stand, Jacksonville, Fla.  
Krege Store, Newark, N. J.  
Light and Power Bldg., Kansas City, Mo.

TEMPRITE has revolutionized water cooling in Stores, Shops, Cafeterias, Restaurants, Foundries, Factories, Office Buildings, Hospitals—everywhere cold running water is desirable.

TEMPRITE, when originally installed, costs less than other systems and does more. 300 cold drinks for a penny is nothing unusual in Temprite's history.

TEMPRITE has such high refrigerating efficiency and comes in such attractive new models that dealers find it a profitable feature.

Send for Specifications and  
Prices on the entire Temprite  
Line and Learn How you can  
Bolster Your Profits.

**LIQUID COOLER CORPORATION**  
6527 Russell Street Detroit, Mich.



## COLUMBIA PHONOGRAPH CO. BRANCH TO HANDLE NORGE

ATLANTA—Distribution of the Norge electric refrigerator through Georgia, South Carolina, and western North Carolina will be handled by the Atlanta branch of the Columbia Phonograph Co.

Arrangements for the distributorship were completed recently by Westervelt Terhune, southeastern district manager for Columbia, and T. P. Hallock, southeastern district manager for Norge.

In addition to distribution for the local branch, warehouse and shipping facilities also will be provided at Charlotte, N. C.

## Featured Base Section By Milwaukee Case

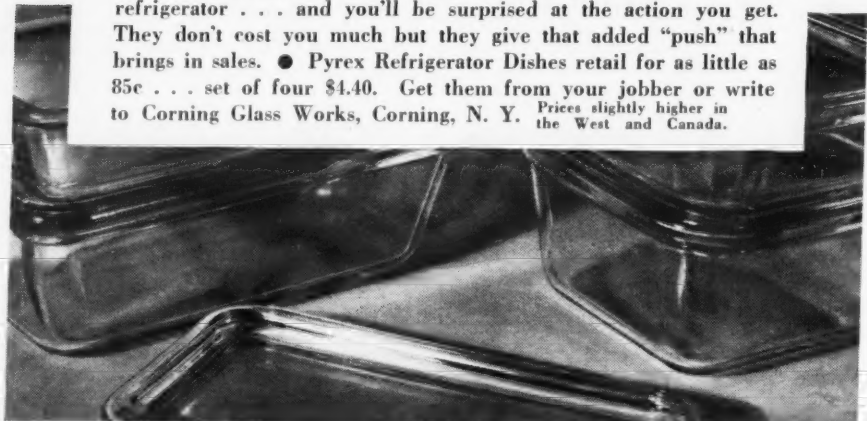
MILWAUKEE, Wis.—A base display compartment features the model B-10 case of the line developed by the Milwaukee Refrigerator Co.

This base display compartment is refrigerated by separate coils or ice compartments. It is completely isolated from the upper display compartment by partitioning and insulation. It is made up in 6, 8, 10, or 12 ft. lengths.

The company has brought out no low temperature cases for quick-frozen products as yet. Some work is being carried on pastry and bakery cases.

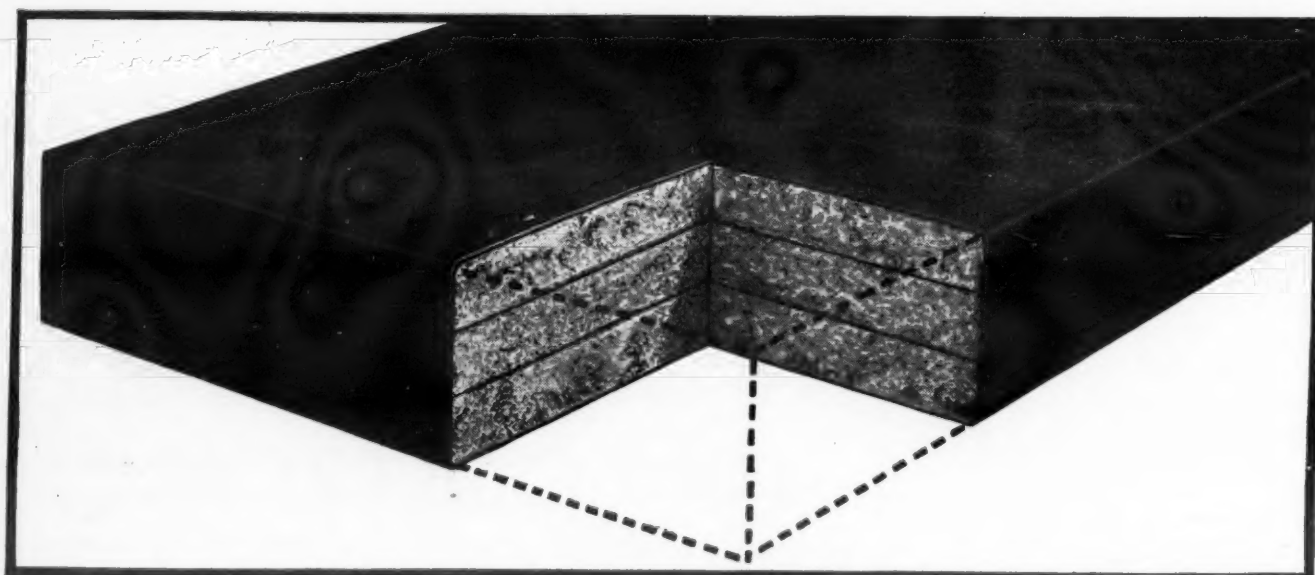
## Accessories help to sell automobiles . . . why not refrigerators?

MANY a prospective automobile buyer has been swayed in his decision to buy a certain car by its accessories . . . the little extras that count a lot when the final judgment is made. And many a refrigerator buyer has bought a refrigerator because it had some little thing competitors didn't have. • Add a couple of Pyrex Refrigerator Dishes as premiums to the sale of your refrigerator . . . and you'll be surprised at the action you get. They don't cost you much but they give that added "push" that brings in sales. • Pyrex Refrigerator Dishes retail for as little as 85c . . . set of four \$4.40. Get them from your jobber or write to Corning Glass Works, Corning, N. Y. Prices slightly higher in the West and Canada.



**PYREX REFRIGERATOR DISHES** Pyrex is the trade-mark which indicates manufacture by Corning Glass Works.

# 6 important points in Refrigerator Insulation



## You'll find them all in BALSAM-WOOL SEALED SLABS

- 1 Highly Efficient:** Balsam-Wool is a felted, woolly mat, made from wood. Its millions of tiny fibres contain "dead or still air"—next to a vacuum, the best insulation known.
- 2 Positive Assurance of Value:** Balsam-Wool Sealed Slabs are completely filled with full size sheets of Balsam-Wool. They are made to any length, breadth, and thickness.
- 3 Durable:** They withstand rough handling and long service without collapsing. They will not settle under vibration. And once in place Balsam-Wool Sealed Slabs are there to stay.
- 4 Carefully Sealed:** They are wrapped in tough, waterproof paper. Hermetically sealed. They

are odorless, sanitary, carefully sealed against moisture.

- 5 Semi-Rigid:** Flexible enough to fit snug. Rigid enough for proper installation.
- 6 Regularly tested:** Balsam-Wool Sealed Slabs are regularly tested for uniformity and efficiency in our laboratories. Tests made by impartial authorities show that the average thermal conductivity of Balsam-Wool does not exceed .25 B. t. u. per sq. ft., per inch thickness, per hour, per degree Fahrenheit difference in temperature.

We will gladly send a Balsam-Wool Sealed Slab free to anyone interested, so they can conduct their own test with this true insulation. Write to nearest sales office listed below.

## WOOD CONVERSION COMPANY

Mills at Cloquet, Minnesota

Industrial Sales Offices:

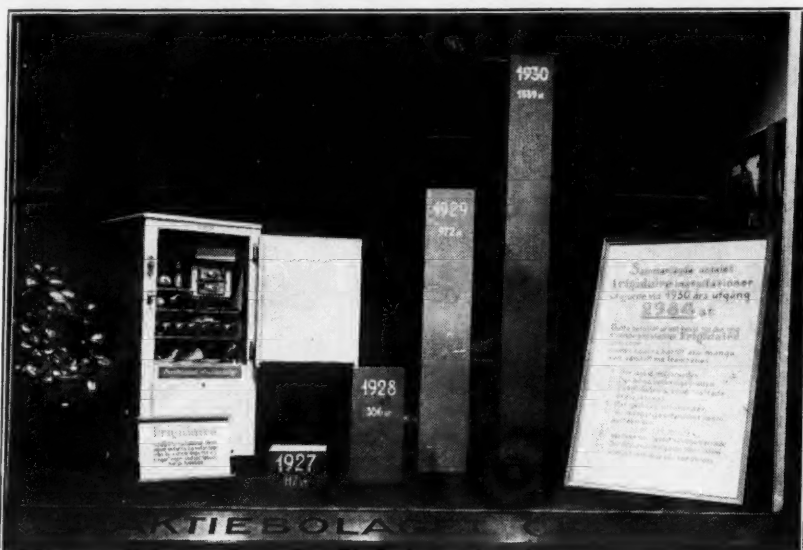
CHICAGO, 360 N. MICHIGAN AVE.

Detroit, 515 Stephenson Bldg.

San Francisco, 149 California St.

New York, 3107 Chanin Bldg.

## Portraying Sales Growth In Sweden



In a recent window display, Aktiebolaget Celer, Frigidaire distributor for Sweden, took occasion to call to public attention the rapidly growing acceptance of electric refrigeration in that country. Four various sized blocks in the display represent yearly sales of Frigidaire units in Sweden.

## Stanton New Milwaukee Westinghouse Manager

EAST PITTSBURGH—John J. Stanton, merchandise manager of the north-west district of Westinghouse Electric and Mfg. Co., has been appointed Milwaukee manager of the firm. In his new capacity he has charge of the state of Wisconsin and the upper peninsula of Michigan.

Mr. Stanton was born and educated in New York, and came to Westinghouse in 1916, travelling the state of Wisconsin as salesman. He was appointed merchandise manager in 1926.

## ROADSIDE STAND SERVES TEMPRITE COOLED WATER

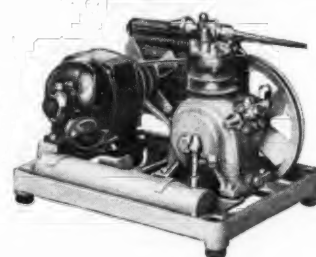
ST. LOUIS—The Dean Sister's roadside stand which serves sandwiches and soft drinks of all kinds, has recently been equipped with refrigeration equipment including water cooler service.

The electric refrigeration equipment was installed by the Central States Distributors, Serval distributor, and included Temprite model 35's.

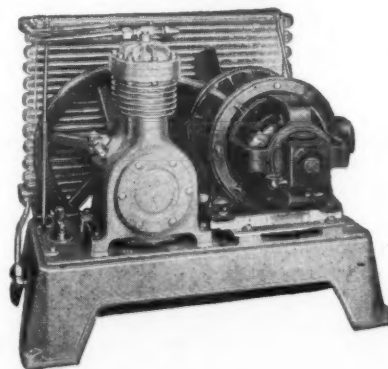
## MAYFLOWER DISTRIBUTOR SELLS 4 CARLOADS

DENVER, Colo.—(UTPS)—G. P. Hopkins, sales manager for the Mid Western Corp., distributor for the Mayflower electric refrigerator, report that four car loads of Mayflower machines are being sold each month here.

## KULAIR Simplicity, quality, efficiency and capacity unequalled



A size for every use  
**Methyl Chloride**  
or  
**Sulphur Dioxide**  
Air or Water Cooled  
**CONDENSING UNITS**



95 to 2500 Lbs.

The Important Enhancement of Dealer and Retail customer confidence in Kulair clientele Allowing Distribution and Sales UNDER PRIVATE BRANDS will benefit your distributing establishment

**KULAIR CORPORATION**  
PHILADELPHIA, PA.

## ELECTROLUX DEALER GIVES BEAUTY SHOW

NEW YORK, N. Y.—The ice cube, nature's own astringent, and an Electrolux refrigerator played an important role in a beauty pageant held recently in the Consolidated Gas company's display rooms.

Cooperation of beauty authorities Helena Rubenstein, Fredericks, Contoure, Marinello and Ogilvie Sisters was enlisted in this novel venture.

Actual facial and hair treatments were given to volunteers from the audience, latest Parisian ideas on the hair and skin explained, and the use of a new liquid powder developed by the Ogilvie Sisters was demonstrated. This liquid powder, it is interesting to note, is first poured over an ice cube before application to the face and hands.

The Beauty Care show was so successful that it continued daily for a period of four weeks, according to R. M. Martin, director of display, who was responsible for many of the arrangements.

"The primary purpose of this activity by the Consolidated Gas Co. was to stimulate showroom attendance," said Mr. Martin. "Refrigeration, however, was definitely associated with it. The demonstrators recommended, among other things, that beauty preparations be kept at an even temperature during the summer months. The importance of a ready supply of ice cubes is supplementary to the care of the face at home."

## ROBERT ROSE APPOINTED MANAGER OF METERICE

LOS ANGELES—The appointment of Robert B. Rose as general manager has been announced by Meterice of America Co., Ltd., manufacturer of "Meter-Ice" coin registers.

Mr. Rose was formerly general manager of the Platt Music Co. here. Mr. Rose was for 10 years a merchandising manager with R. H. Macy Co., New York department store. He has also been general manager of Landry Bros. music stores, New York City, and vice president of the American Piano Co.

Of the \$102,000 business during the week following the initial advertising, \$30,000 worth of electric refrigerators were sold along conventional lines, under the straight contract plan and \$72,000 under the Meter-Ice plan.

Under the latter plan, a customer signs a regular purchase contract just as under the standard installment agreement, the only difference being that under the former plan the purchaser paid monthly and under the Meter-Ice plan, she pays 25c daily for 24 hours of service.

Meter-Ice coin registers are owned and controlled by Meterice Co. of America, Ltd., under full patent protection, and are manufactured under contract by the General Electric Co. Platt Music Co. was named sole distributor in Southern California.

## FRIGIDAIRE UNIT USED TO COOL PHOTO SOLUTIONS IN STUDIO DARK ROOM

NEW HAVEN, Conn.—Electric refrigeration has entered the dark room of William R. Shalvoy, commercial photographer operating a studio at West Haven. Frigidaire equipment has been installed to cool trays of developer and other solutions.

The installation was made by Samuel Levine, until recently service manager for the New Haven retail store of R. G. Rust, Frigidaire dealer. Equipment consists of an A compressor with special coil made up of 50 feet of 1/2 in. tubing, with expansion valve and thermostat switch.

Water running through four baths is kept at a temperature of 68°, the switch cutting in at 70° and out at 65°, according to Mr. Levine.

## DEJONGH TAKES DISTRICT MANAGER'S POST

SEATTLE, Wash.—Ivan L. DeJongh, formerly with the Frigidaire organization on the Pacific Coast, has been named district manager in charge of refrigeration by the Westinghouse Electric & Mfg. Co.

Westinghouse distribution is now being extended to the Pacific Coast area and dealers and distributors are being set up in the field.

## MAYFLOWER NAMES THREE DISTRIBUTORS

DAYTON, Ohio—Three distributing organizations have been named distributors of Mayflower electric refrigerators according to W. S. Legler, merchandising division of the Trupar Mfg. Co.

Mackenzie, White & Dunsmuir, Ltd., Vancouver, B. C.; Bering-Cortes Hardware Co., Houston, Tex., and Wathins-Cottrell Co., Richmond, Va., are the distributors.



## AUTO TRAILER USED IN SALES PROMOTION

OMAHA, Nebr.—The National Accessories, Inc. has a new idea for promoting the sales of electric refrigerators and radios by means of a trailer so built that it can be readily hooked to a Chevrolet coupe and transported from town to town as desired.

Construction permits the trailer to be opened to 8 ft. in width and 10 ft. in length. Cross metal rails permit the trailer to pull out on either side, leaving a passageway of 3 ft. the entire length of the cab. This allows ample space for visitors to examine the refrigerators and radios.

When ready for the road either side is slid in on the rail and locked to a width of the auto.

The National Accessories, Inc., is state distributor for Mohawk refrigerators and Lyric radios. The trailer is now out in the state on its first demonstration trip.

The outfit has been photographed on several hundred cards of postal size. These cards are used as advance invitations to the dealer and his prospects to visit the trailer on a certain date.

Both radios and refrigerators are hooked up and in operation when open to the public. The entire cost of the trailer for both material and labor was \$2,600.

## REFRIGERATION DEALER SELLS AIR CONDITIONER

BATTLE CREEK, Mich.—The Radio Equipment Co. (Parsons Bros.), 114 W. Michigan Ave., Majestic dealer, is actively pushing an air conditioning furnace manufactured by the Economy Baler Co. of Ann Arbor, Mich.

A Majestic refrigerator is displayed in one window and the Economy furnace in the other. The furnace is specially designed to operate in connection with a Silent Automatic oil burner. A separate motor operates a fan which drives air through the house after it passes through a fine spray of water. Under normal conditions the device will change the air of a home six times during an hour. The temperature of the air is also lowered by passing through the cold water spray.

According to I. C. Cole of the Radio Equipment Co., food economy is the strongest appeal in selling electric refrigerators. Mr. Cole shows his prospect how the saving in food will offset the cost of the small monthly payments.

He says that the No. 4 Majestic which sells for \$179.50 is the most popular size and that the No. 7 at \$270 comes next. If the customer is considering the No. 5 at \$245, he says, it is usually easy to show the advantages of paying a little more for the No. 7 with its additional food capacity.

The Consumers Power Co. gives excellent cooperation to dealers, installing electrical outlets free where required. Formerly there was the charge for additional outlets for refrigerators, oil burners and other appliances which added materially to the customer's cost and sometimes acted as an obstacle to sales.

## They Put Campaign Across



High ranking salesmen and dealers were awarded prizes in the recent Nat Elin birthday contest sponsored by Elin Co., Newark, N. J., Westinghouse refrigerator distributor. The drive ended with the quota equalled, one dealer selling 450 per cent of his quota.

## WESTINGHOUSE APPOINTS DAVIS ADVERTISING HEAD

EAST PITTSBURGH, Pa. — R. R. Davis, who has directed in the past 21 years, various Westinghouse advertising activities, has been appointed apparatus advertising manager of the Westinghouse Electric and Mfg. Co., at East Pittsburgh.

He will have charge of all apparatus advertising activities of the company except the merchandising department.

His service with the company started in 1905, immediately following his graduation as an electrical engineer from the Western University of Pennsylvania, now the University of Pittsburgh.

In 1910 he became associated with the Westinghouse advertising department and in the ensuing period had directed the activities and had executive control of most of its divisions. In 1925 he was named assistant to manager of the department and last year became editor-in-chief.

## SELLS 120% OF YEAR'S QUOTA IN 6 MONTHS

BURLINGTON, Vt.—During the first six months of 1931, the Cartmell Sales and Service Co., Frigidaire dealer, sold 120 per cent of its year's quota.

## Jeweler Adds Line Of Refrigerators

OMAHA, Nebr.—Sol Lewis, operating a small jewelry store in the suburbs of this city for many years, has moved to the State Bank building and added radio and electric refrigeration.

"Electric refrigerators do not interfere in the least with sale of jewelry, and really add dignity to the business," states Mr. Lewis.

## SALESMAN GETS 26 ORDERS IN CAMPAIGN

ASHTABULA, Ohio—George Jenks, salesman of the Lake Shore Gas Co., sold 26 Electrolux refrigerators valued at \$6,000 in a recent six-week refrigeration jubilee sponsored by the gas utilities group of the associated system.

## ALVEY SALES SUPERVISOR FOR NORGE IN BALTIMORE

BALTIMORE, Md.—Martin Alvey has been appointed supervisor of Norge electric refrigeration sales for the Hochschild, Kohn & Co., Inc. Mr. Alvey will organize a sales crew of about a dozen men.

## RALEIGH DEALERS HOLD REFRIGERATION EXHIBITION

RALEIGH, N. C.—Raleigh's first annual refrigeration show, sponsored by the Raleigh News & Observer and local refrigerator dealers, was held at the Sir Walter hotel recently. The exhibition was attended by over 4,000 persons.

Local dealers represented in the exhibition were: Raleigh Gas Co., Electrolux, C. H. Stephenson Music Co., Frigidaire; Carolina Power & Light Co., Kelvinator and General Electric; Thompson Electrical Co., Westinghouse; Rawls Radio & Tire Co., Servel; Montfort Plumbing & Heating Co., Norge; and Lewis Sporting Goods Co., Majestic.

## NEWARK DEALER SHOWS 100% SALES GAIN

NEWARK, N. J.—Nash Refrigeration Co. has shown an increase of over 100 per cent in sales over last year's record as of July 31.

It has recently added to its list of commercial installations, a number of markets, and apartment houses, including the Poulsen Bldg., Elizabeth, N. J., 18 apartments; Spruce Apartments, 45 apartments.

Efforts have been concentrated on commercial sales, however.

## 86 ELECTROLUX UNITS SOLD DURING 8 DAYS

BROOKLYN, N. Y.—A total of 86 Electrolux refrigerators have been sold during the first eight days of the Great American Servant refrigeration campaign, by dealers of the Brooklyn Union Gas Co., which will close Sept. 30.

On Aug. 8, the end of the first week, Phillip Ollivier, of Newtown branch, held the lead among the salesfloor people, with five individual sales.

The Bailey-Cole Electric Co. held first place among the dealers with six sales during the first four days, a record rivaled by the Shifley Engineering Co., which sold three in two days.

Tompkins & Hart has added five salesmen to its staff and has engaged a girl to demonstrate the Electrolux in its show window during the drive. In addition the firm is participating in a neighborhood carnival by showing an Electrolux on a float.

Another dealer, the Brooklyn Radio Service Co., has added 12 men to its organization.

## MILLER MADE SALES HEAD OF PENN HEAT CONTROL

CLEVELAND—George S. Miller, who entered the employ of the General Electric Co., in Pittsfield, Mass., in 1915, and advanced to the position of district representative for the General Electric refrigeration department, has severed his connections with that department to become eastern sales manager for the Penn Heat Control Co., Philadelphia, a subsidiary of the General Electric Co., marketing the General Electric Heat Regulator.

Mr. Miller began his career in the transformer department of the Pittsfield works and later was made manager of the toy transformer division, which position he held for several years. He was one of the first men transferred to the central station division in 1925 to specialize in electric refrigeration.

Upon the formation of the General Electric refrigeration department in 1927, Mr. Miller was appointed district representative with headquarters in Springfield, Mass. He later was transferred to Philadelphia from where he covered the Atlantic coast territory from New Jersey south.

## KANSAS UTILITY LAW BRINGS CHANGES IN DEALERS

KANSAS CITY—Changes in dealership caused by the new Kansas law which prohibits merchandising by public utilities are being made by R. E. Parsons Co., Frigidaire distributor. The law went into effect Aug. 1.

Sole dealership in 29 towns was held by Kansas Power & Light Co.

New dealers are: W. M. Crosby, Topeka; O. W. Zabel, Baldwin City; Kansas Electrical Co., Atchison; Roy Wilson, Paola, and C. H. White, Harrisonville. F. L. Koenig is manager of Crosby's refrigeration department, while A. C. Barker, former sales manager for the utility, has the same post with Crosby.

Standard Equipment with—

**Copeland**  
DEPENDABLE Refrigeration  
DETROIT, MICH.

**UNIVERSAL**  
DETROIT, MICH.

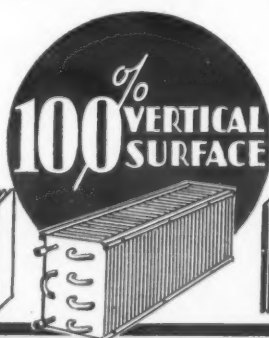
**SERVEL**  
Electric Refrigeration

**JACK FROST**  
REFRIGERATION, LTD.  
TORONTO-CANADA

**NE** Electric-Automatic REFRIGERATOR  
PHILADELPHIA

**Zerozone**  
Life-time Refrigeration

**JEWEL**  
Refrigeration  
"Largest, Most Versatile Class"



U.S. PATENT No. 1,776,235.

## They Make Sales Easier by Assuring Greater Efficiency

That's why LARKIN 100% Vertical Surface Aluminum Plate COILS are standard factory equipment . . . why the Larkin factory is running day and night . . . Delivery promises to the trade are being met and we are keeping pace with tremendously growing demand.

LARKIN COILS, available in over 90 sizes for commercial use, have solved the problems of Dehydration and Defrosting . . . Their simplicity and efficiency reduce servicing . . . Factory tests prove this—Growing business with distributors proves this—Satisfied users prove this . . . LARKIN COILS make sales easier by assuring greater efficiency . . . Facts and elaborate data on request.

**LARKIN-WARREN REFRIGERATING CORPORATION**  
Originators and Manufacturers

ATLANTA

GEORGIA

Standard Equipment with—

**Absopure**  
DETROIT, MICH.

**WILLIAMS ICE-O-MATIC**  
REFRIGERATION  
BLOOMINGTON, ILLINOIS

**KULAIR**  
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**TRUPAR**  
DAYTON, OHIO

**ELECTRIC RICE**  
REFRIGERATION

**Modern**

**B-K, Junior**  
New Brunswick, N.J.



IDEAS AND  
IMPRESSIONSCOMMENT • VIEWS AND  
EXPERIENCES

By F. M. COCKRELL

## Stability Insurance

Howard Lewis, treasurer of Kelvinator and in charge of foreign operations, tells of an experience which carries a lesson for the small business proprietor.

On his last European trip, he found a Kelvinator agency in a mess due to sudden serious illness of the owner.

The agent had a nice business but everything was at a standstill and heavy losses were imminent because no one had authority to carry on. There was money in the bank, but it could not be withdrawn to meet payroll and other expenses.

Lewis warned me to make provision for such emergencies in my own business.

The problem of insuring the continuity of an enterprise during an enforced absence of its directing head is a serious one for every owner of a small business.

Many a man has worked long and hard building up a business only to have it go to pieces in a few weeks during which he was temporarily out of commission.

Howard's suggestion undoubtedly applies to many readers of this paper since the electric refrigeration industry is young and many activities are still in the development stage. Good health of the promoter will be an important factor in determining the success of many promising propositions.

During the past five years, I have given considerable thought to ways and

means of stabilizing this business, at least to the point where the continued publication of the News would not be jeopardized by my own absence for any cause, unexpected or otherwise. A year and one-half ago some of the precautionary measures were justified when I had to spend several weeks in a hospital.

## Capable Assistants

In addition to the legal steps and financial arrangements which every business man should make with the aid of a competent lawyer, there are numerous other ways to promote stability of operation.

The most obvious requirement, of course, is to develop an organization, or at least an assistant, trained to take responsibility and with full authority to act.

But business men are always complaining that they cannot find assistants willing or able to carry the load and do the job without constant supervision.

It should be fairly apparent that if the assistant had the training, experience, judgment, confidence and other qualifications necessary to run the business, he would probably be running one of his own or would be functioning as a corporation executive with a salary commensurate with his position.

It takes time and patience to train employees. It is not surprising that employees lack the skill or confidence to handle a difficult situation if they have not had an opportunity to practice the use of their judgment or a chance to

use their own ideas in solving a problem.

But assuming that a large number of people do not have executive ability and never will have it, there are ways to train such help to perform effectively without personal supervision.

The routine worker, in fact, is probably more helpful in tiding over a period when the driving hand is relaxed than is the versatile or imaginative type. He goes through his regular motions as a matter of habit.

A good milk wagon horse will make all stops on the route even with a green driver.

A new executive of a large corporation would be out of luck, in most cases, if it were not for the fact that the regular organization will handle the details and carry on the business until such time as he can find out what it is all about and get his job in hand.

## Translating Into Routine

In other words, one reliable answer to the problem of stability is system.

Versatile, imaginative, temperamental people abhor system, but routine workers like it.

Active minds prefer to chart their course as they go. Skillful hands and nimble fingers achieve their dexterity by constant repetition.

System consists of segregating the repeat operations in a business and finding the best way that each should be done.

The store or office must be opened in the morning and closed at night. No use having to decide that question daily. We systematize the job.

Even a salesman, the most temperamental individual around the place, finds that many of the obstacles he must hurdle every day are simply repeaters. The most successful salesmen standardize certain parts of their talk and thereby conserve their mental energy for use in studying the peculiarities of each customer.

In like manner the manager of a business can save himself from much work and worry by systematizing the repeat operations of supervision.

Stated another way, system means translating jobs into routine.

## Printed Forms

One of the effective tools for translating jobs into routine is the printed form.

For example, an order blank which has a space for each item of essential information to be secured has the effect of concentrating the attention of both salesman and customer on the job to be done.

Even credit information may be requested as a part of the routine of filling in the blank.

“We are never bothered  
with defrosting problems”

Hales Liberty Markets, Dayton, Ohio, testify to their complete satisfaction in Mayflower Commercial Refrigeration.\*

“Gentlemen:

We want you to know how pleased we are with the Mayflower Refrigeration system you installed in our sixth store.

Frost has never formed on our coils. Hence, we are never bothered with defrosting problems. Our meats and foodstuffs never become dried out and discolored, so we don't lose a penny through trimming or loss of weight.

However, the one thing that pleases us most is the low cost of

operation. We've had experience with different types of mechanical refrigeration in our other stores, and we can say that the cost of operating our Mayflower system is considerably lower.

We are glad to recommend Mayflower Refrigeration as our experience proves that it is way out in front of other makes.

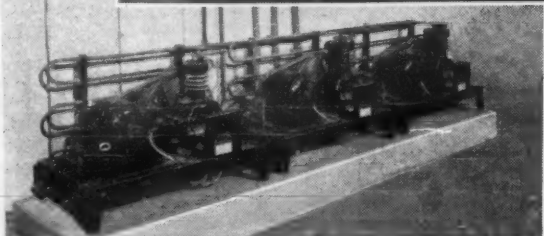
Yours very truly,  
Thos. A. Hildebrandt.”

\*Original letter on file in our office.

TRUPAR MFG. COMPANY  
DAYTON, OHIO

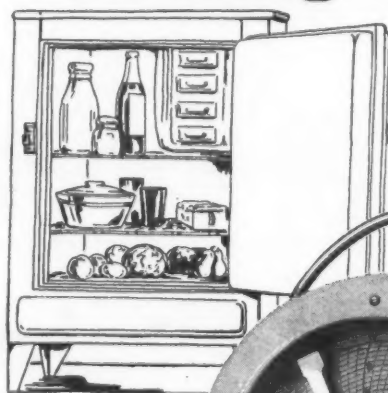


Installation in Hales Market, Dayton, Ohio.



Don't overlook the superior advantages Mayflower Commercial Refrigeration offers. Service calls reduced to absolute minimum—big profits—easy to install—low in price.

**MAYFLOWER**  
ELECTRIC REFRIGERATION

How Cool Is That  
Cooling Chamber...

TODAY'S electric refrigeration market is well educated in what to expect of a unit. Proof of the operating efficiency is imperative... prospects or users must know that at all times right temperatures are maintained.

How cold—can be answered emphatically by placing in the cooling chamber Bristol's Handy Recording Thermometer. This in-

formation, prices, see Bulletin No. 377.

THE BRISTOL COMPANY, WATERBURY, CONNECTICUT

Branch  
Offices:  
Boston  
New York  
Philadelphia  
Birmingham  
Pittsburgh  
Akron

**BRISTOL'S**  
INSTRUMENTS  
FOR RECORDING INDICATING CONTROLLING

Branch  
Offices:  
Chicago  
Detroit  
St. Louis  
Denver  
San Francisco  
Los Angeles

Can  
You  
Really  
Tell?

strument, with the continuous 72-hour record, automatically records any variation in temperatures which occur, and writes the complete refrigeration story on the chart. The Recording Thermometer furnished calibrated to use with chart having range of 30 to 70° F., has been found to be most suitable for refrigeration requirements. Instruments made up this way are carried in stock for prompt shipment. For further information, prices, see Bulletin No. 377.

## August Travels

During the month of August, I have traveled a total of 2,150 miles by automobile through Michigan, Wisconsin, Minnesota, and Indiana, stopping at numerous manufacturing centers where electric refrigerators, cabinets, display cases, hardware, insulation, and other refrigeration equipment, parts, and materials are made.

Refrigerator plants are thick in this section, many of them having started as wood working shops and ice box builders 20 or 30 years ago.

The rise of the all-metal styles in recent years has forced the manufacturers to put in metal working tools and the lumber piles are not so large as in former times.

Judging by the conversation of the old-timers, the old ice box business used to be a comparatively comfortable sort of trade. Once a year, perhaps, the owners made a selling foray and brought back enough orders to keep the wheels turning for another season. When the season was over they shut down the plant and took things easy.

The advent of electric refrigeration brought a lot of things to worry about. The high-pressure boys in the new field made all kinds of unheard-of demands. They had big ideas and wanted things in a hurry.

New electric refrigeration companies sprung up everywhere. All the promoters talked big money and quantity production. Some had the money, millions of it, and some had none. It was not easy to tell the difference. A few of the box men made a clean-up and others found themselves holding the bag for fly-by-night ventures.

## Father and Son

The younger generation, sons of the founders, are much in evidence now. They have caught the spirit of the mechanical era and are full of enthusiasm.

A good example of father and son combination is the Riek family at Rhinelander, Wis. Father is R. A. Riek, general manager of the Rhinelander Refrigerator Co., and son is Forest Otto Riek. They make a fine team and work together perfectly.

Forest, who acquired the name of “Frosty” at ice box conventions, spent three years at the University of Wisconsin and graduated from the refrigeration engineering course at Siebel Institute of Technology.

In 1926 he wrote the Rhinelander “Handbook of Refrigeration,” a 200-page volume which combines a history of refrigeration with technical data and a catalog of Rhinelander refrigerators. It has had a wide circulation.

“Frosty” has some ideas about a new way to obtain refrigeration and has applied for a patent on his “endothermic system.” He is imbued with energy and sees the surplus area around the Rhinelander factory as a place to build bigger buildings in which to make more refrigerators.

He points with pride to a table on which may be found every issue of ELECTRIC REFRIGERATION NEWS ever published, all neatly filed in binders. Back of his desk are shelves full of technical books. Downstairs he is building a new test room with automatic controls for temperature and humidity.

Riek, junior, will talk the fine points of refrigeration to prospective custom-

ers, but if there is any plain or fancy trading to be done, Riek senior will probably deal himself a hand.

## Window Displays

Recent issues of the News have carried stories about the sales contests and special campaigns designed to prolong the usual selling season. All the leading manufacturers are making plans to stimulate autumn business.

In past years there has been much theorizing about year-round sales, but sales managers have had a noticeable tendency to relax their efforts and production departments have evidenced a lack of faith that orders would materialize.

This year, for the first time, it appears that an aggressive and determined effort will be made to keep the curve from sagging. Our observation of the activity leads us to believe that results will be forthcoming.

An encouraging sign is the flare of window displays to be seen in dealers' stores all over the country. The displays indicate that the dealers are taking the promotion programs seriously and that real effort is being made locally to follow through the national drives.

Driving through main streets of cities and small towns, I made notes of electric refrigeration window displays and electric signs. The list below is by no means complete, but is simply some which were spotted enroute.

Howell, Mich.—Herbst & Knapp have a Kelvinator window display. Pemberton's Department store has a large Frigidaire electric sign.

East Lansing, Mich.—Westinghouse refrigerator in an electrical and radio store.

Lansing, Mich.—A. W. Shields on Washington St., displays a Copeland.

Grand Rapids, Mich.—There is a Gibson electric refrigerator store on Fulton St. N. E. The Consumers Power Co., on Pearl St., has windows plastered with Kelvinator “Comparison Contest” material around a Kelvinator unit. On the same street there is a Frigidaire display with the set of dishes being given with each sale, also a Frigidaire electric sign.

Muskegon, Mich.—John E. Lansdale at 873 Terrace St., has a Frigidaire electric sign and window display. The State Electric Co., on the same street shows General Electric refrigerator, also G. E. radio, G. E. vacuum cleaner and G. E. electric clock all in the same window.

Whitehall, Mich.—The Pike Garage has three Westinghouse electric refrigerators on the floor, visible from the street.

Frankfort, Mich.—M. & L. Electric Co. carries Majestic refrigerator and radio signs, but did not have a unit in the window.

Menominee, Mich.—Cherney's Music Store has the Kelvinator “Comparison Contest” display and the same is shown by V. & M. Electric Co., The M. & M. Light and Traction Co. has a General Electric window.

Merrill, Wis.—There is a Westinghouse window display at Mead's Variety store and Kelvinator is shown by Wisconsin Valley Electric Co.

Eau Claire, Wis.—Northern States Power Co. has a Kelvinator display.

Goodman, Wis.—Kelvinator is in the window of Goodman Department store.

St. Paul, Minn.—Lambert-Simpson-Millis on Sixth St., have a Frigidaire window. O. F. Stuffer, Inc., at Sixth and Jackson, exhibits General Electric. There is a big Frigidaire display at the Twin Cities branch of Frigidaire Corp. on University Ave.

Minneapolis, Minn.—The Stenson Co., on Nicollet, shows Frigidaire.

Rochester, Minn.—Norge is on display in window of Bach Music Co., Majestic at H. & H. Electric Co., and Kelvinator at A. H. Foster Electric Shop.

La Crosse, Wis.—Peshak Sales Co. has a Frigidaire display. Marquardt and Manning, plumbing and heating contractors, show a Mayflower.

Baraboo, Wis.—Kelvinator is displayed by Isenberg Music Co., Frigidaire by Hansel-Hill Co., and Servel by Martiny and Weidenkoph.

Madison, Wis.—Copeland display by Harloff Electric Co., and Mayflower by Wm. Schwalger.

Cambridge, Wis.—Prescott's store has a Frigidaire in the window.

Fort Atkinson, Wis.—General Electric is displayed by Wisconsin Gas & Electric Co.

Whitewater, Wis.—Winchester Hardware store exhibits the Westinghouse and the Wisconsin Gas & Electric Co. features General Electric.

Elkhorn, Wis.—General Electric is shown by Elkhorn Light & Power Co., and Westinghouse by Oleson Hardware Co.

Lake Geneva, Wis.—Nuoffer Home Equipment Co. has a Kelvinator in the window.

(Concluded on Next Page)



# IDEAS AND IMPRESSIONS • COMMENT • VIEWS AND EXPERIENCES

By F. M. COCKRELL

(Concluded from Page 16)

Genoa City, Wis.—B. F. Schuren displays Majestic.

Wauconda, Ill.—Majestic is displayed by Blackburn & Broughton.

South Bend, Ind.—The Stover Co. has a corner store with Frigidaire display and General Electric is shown by Indiana & Michigan Electric Co., Servel is displayed by Superior Refrigerator Co.

## Payroll Checks

"Most people find that they have bought electric refrigerators which are too small for their needs," said G. R. Seeger of the Seeger Refrigerator Co., Wells and Arcade Sts., St. Paul, Minn., in discussing the outlook for the coming year.

"The industry has about reached the limit of small sizes and I believe the future trend will be to larger capacities," he said.

The Seeger plant is working day and night at the present time and has been much busier this summer than any previous year.

When I called, Mr. Seeger was just starting to sign a big stack of payroll checks. It looked like a lot of money to me and I inquired about the number. He started to make a mental estimate and then turned to the phone and called for the correct count. The reply came—750.

"There has been almost a cabinet shortage this season," continued Mr. Seeger, "and the indications are that buying for next year will start earlier than ever before."

"There is no question that next year's volume of business will be larger and unless the plants maintain 100 per cent capacity, it will be difficult to supply the demand."

Mr. Seeger looks for a decided increase in commercial sizes in 1932 because this type of business has been retarded by the depression.

The Seeger company makes cabinets for Westinghouse, Apex, Williams, General Electric (commercial), and others and does a large business in special sizes direct with distributors. Large apartment installations and custom-built jobs for institutions and food service establishments form an important part of their output.

Further comments by Mr. Seeger on cabinet construction and materials are given in the engineering section of this issue.

## Lacquer Technique

Another busy plant is that of the Puffer-Hubbard Co., 26th St. and 32nd Ave., Minneapolis. Apparently this company can make most anything out of metal or wood.

A couple of floors were full of Mayflower electric refrigeration cabinets in process. Refrigerated display cases were being constructed. Automobile trunks were on the conveyor line in the finishing section. Stacks of collapsible delivery boxes were in one corner. These patented boxes are an old stand-by item with the Puffer-Hubbard Co.

C. A. Pulver, secretary of the company says that lacquer finish on refrigeration cabinets will hold up if the steel is thoroughly cleaned and the prime coat is baked. He claims that the trick is to get the prime coat right.

Also he says that one brand of steel which is fine for porcelain is not good for lacquer.

Both porcelain and lacquer finishes are used for Mayflower cabinets. Insulite is the principal insulation used.

Refrigerated show cases are sold under the name of C. P. Long Engineering Co., which, I understand, is owned or controlled by Puffer-Hubbard.

Kelvinator machines and coils are used for the self-contained units. Stainless steel is applied for the trim and counter. The white parts have a lacquer finish.

A patented electric heating element is attached to the cooling coil and will defrost it in 20 minutes.

They make water cooler cabinets for Copeland and have turned out several thousand in past years for General Electric. They are now bringing out a water cooler of their own, but have not yet decided on the compressor unit to be built into it.

Winston-Newell, wholesale grocers and headquarters for the Independent Grocers' Association, will sell about 100 of their display cases this year.

## Merchandising Tricks

La Crosse Refrigerator Co., La Crosse, Wis., has just completed the best year in its history, according to B. G. Duer, general sales manager, sales running 140 per cent ahead of the previous fiscal year.

This company claims the distinction

of being one of the two surviving ice box manufacturers not directly or indirectly connected with mechanical refrigeration. They sell their product to ice companies, furniture and hardware jobbers and furniture dealers.

Mr. Duer joined La Crosse a year ago last July, coming from Leonard, where he handled ice company syndicate business. The La Crosse company has been operating eight years.

It appears that this company is doing some very smart merchandising and is teaching the stodgy old ice industry a line of new selling tricks.

Instead of trying to beat electric refrigeration competition by making ice boxes cheaper than ever before, La Crosse dolled up the box, put some gadgets and fancy hardware on it and adjusted prices upward.

Mr. Duer admits that he is a follower of E. St. Elmo Lewis. He says: "I have heard so much of the Lewis gab that I am beginning to believe it." He applied some of E. St. Elmo's philosophy by making a survey to find out what the customer wants. Such a survey for ice boxes consisted mainly in discovering the complaints which women made about their ice boxes.

One of his successful stunts was to bring out the "Black Beauty" model. The black finish cost no more than white, but the factory paid \$2.00 extra for beautiful hardware and the box sold for \$10.00 above the regular price. Over 2,000 were sold.

## The Booker T.

That Duer knows his stuff when it comes to merchandising, is evidenced by a row of nameplates along a ledge behind his desk. I was particularly interested in one, "The Booker T.," and inquired about it. This model was designed especially for the negro trade in the South. Over 700 were sold in Atlanta alone.

Bright and shiny Allegheny metal was used for one model. It made a wonderful display piece, but has been discontinued because of the difficulties in fabricating the stainless steel.

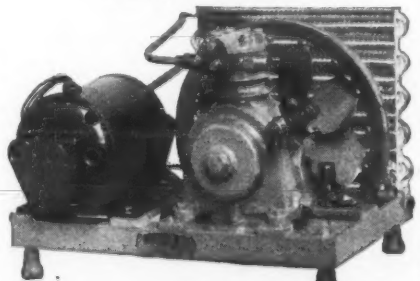
Eight color combinations are offered by the simple trick of changing tops and legs. Other features include a threaded tube for a permanent drain connection, metal trim around the edges of the ice door, and a porcelain bottom where the wear is greatest.

La Crosse refrigerators are finished in baked enamel inside and out and cork is the principal insulation used. When fibre board is used, it is called Wood-Tex, a private name which permits an easy shift from one brand to another.

Grand Rapids Brass Co. furnishes hardware for La Crosse refrigerators. "We never skimp on hardware," says Duer, "that is no place to economize on production costs."

## DICELER ELECTRIC REFRIGERATION

—PRODUCTS—  
A SERVICE TO THE REFRIGERATION INDUSTRY



Model 400, 1-6 H.P. Single Cylinder Condensing Unit

## PRECISION BUILT COMPRESSORS and COMPLETE CONDENSING UNITS

for Electric Refrigeration Manufacturers, Distributors and Dealers

Our plan allows the assembler to advertise and sell under his own name.

Sizes for 1/6, 1/4 and 1/3 H. P. Also commercial sizes up to 3 H. P. Air and water cooled.

Sulphur dioxide and methyl chloride condensing units.

Ideal for domestic refrigerators, ice cream cabinets, water coolers and small commercial installations.

Prices lowest in the history of electric refrigeration.

Full details given on request.

Deissler Machine Company  
Greenville, Pa.

New York Office, 15 Moore Street

Manufacturers of complete domestic and commercial refrigeration systems

## Four Buying Classes

According to Mr. Duer there are four distinct classes of buyers as follows:

(1) The top class who will buy by anything distinctive. They want the latest features and price is secondary.

(2) Those who are trying to keep up with the top. Pride of ownership is the big appeal and price is a consideration.

(3) The great middle class. This group is largest in number and is guided by the upper two, but price is a very important consideration.

(4) The poorer class. Price is the first requisite.

All except the top class buy on terms. The top buy on open account, but do not pay for months and months.

Those in the first group are logical prospects for electric refrigeration, but will buy ice boxes occasionally. Groups two, three and four are logical prospects for ice refrigeration, but the real market consists of the two middle groups.

The market survey mentioned above revealed that black and white is the most popular color scheme with class No. 1. Ivory and green are the two most popular colors with the second and third groups, while red appeals to the fourth group.

## Ice in the South

That ice refrigerators can be sold in this electric era is confirmed by R. G. McCord, sales manager of Bohn Refrigerator Co., 1550 University Ave., St. Paul, Minn., although this company has

recently brought out an electric refrigerator.

According to Mr. McCord, the ice men are regaining their confidence and learning how to merchandise. In some cities in the southern states, he says, they are competing successfully with mechanical refrigerators.

He points to the Thomasville Ice and Mfg. Co. of Thomasville, Ga., as the outstanding ice box merchandiser in the country. This company has just ordered its sixth carload of all-porcelain ice boxes.

Thomasville has a population between six and seven thousand, of which 60 per cent are colored.

Another active ice box center is in New Orleans where the Bohn Refrigerator Shoppe, 223 Baronne St., is operated by the combined ice industry.

A full-page advertisement of this shoppe in the *Times-Picayune*, Aug. 17, offered one-half ton of ice free with each refrigerator sold.

Ice boxes are advertised "at manufacturers cost." The Bohn white syphon all-porcelain model for 75 lbs. of ice is advertised at \$74.95 and the Bohn white sanitor for 100 lbs. of ice is priced at \$64.95.

The advertisement carried this paragraph:

"The only 100 per cent automatic refrigerator, controls temperature, moisture, air purification with no attention or worry and it doesn't heat up the kitchen. Safe—sure—silent."

## Poor, But Honest

Mention was made above of the "big money" promoters of electric refrigeration. A contrast to that type is R. V.

Neuman, manager of the Marinette Show Case Co. at Marinette, Wis.

Said Neuman: "We are probably the poorest company in the electric refrigeration business today. We never had much money but we have less than ever now that we have bought the assets of the Automatic Freezer Corp. (formerly at Hillsdale, Mich.)."

The Marinette company makes display cases and meat coolers, selling most of its output in Wisconsin and the upper peninsula of Michigan. The company has been in business four years, but Neuman has been making show cases for several years. He was previously with the Badger Show Case Co. of Green Bay, Wis.

Neuman's idea is that a refrigerated show case should be a self-contained unit and the machine was acquired with that in mind. They now have drawings, patterns, jigs, dies, parts, and tools which cost many thousands of dollars and are making machines a few at a time.

The machine was developed by V. R. Loranger, now dead.

## SO<sub>2</sub> Molasses

Looking through some papers, Mr. Neuman turned over a label which he had taken from a can of Red Hen molasses put up by Oelrich & Berry Co., New Orleans and Chicago. The label carries the statement: "Contains Sulphur Dioxide."

Apparently SO<sub>2</sub> is edible and is capable of double duty as a food preservative.

Perhaps the sulphur constituent has sales appeal to molasses fans who recall the reputed virtues of sulphur and molasses as a tonic for young and old in the good old days.

"After 5 years close association with QUIET MAY..."

writes HARDCASTLE and FORNEY, INC.

**Hardcastle and Forney**  
INCORPORATED  
ENGINEERING SERVICE EASTON, MARYLAND  
June 8th, 1931

EDWARD B. HARDCASTLE, BALTIMORE, MARYLAND  
EDWARD HARDCASTLE, JR., BALTIMORE, MARYLAND  
CHARLES D. FORNEY, JR., BALTIMORE, MARYLAND  
T. HUGHLEY HENRY, ATTORNEY

May Oil Burner Corp., Baltimore, Maryland.

Gentlemen:

Some one has said that "a man cannot read his tombstone when he's dead" - hence this letter, for after five years close association with the "Quiet May" and with you, the May Oil Burner Corporation, we are now going to state --

that the "Quiet May" Automatic Oil Burner as manufactured by you has always been the finest automatic oil burner that could be purchased. Today it has a greater lead than ever before in the field of automatic oil burners. There is no question that the MAY is "the finest thing of its kind that money can buy."

that the May Oil Burner Corporation has no equal when it comes to co-operating with the dealer. We have, and still do, had business connections with several manufacturers, many of them nationally known, and can honestly say that in our experience there never has been a manufacturer who does as much as you, - and at the same time does it cheerfully.

Yours very sincerely,  
*Edward Hardcastle*  
Electrical Engineer,  
HARDCASTLE & FORNEY, INC.

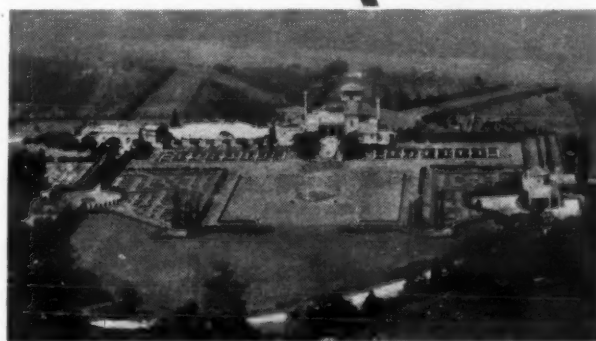
Assures Quiet, Automatic, Clean, Uniform, Dependable Heat, Regardless of Weather Conditions. Designed for Homes, Apartments, Institutions. Easily installed in your present Heating System.



MR. EDWARD HARDCASTLE  
Electrical Engineer  
HARDCASTLE & FORNEY, INC.

Home of  
MR. GLENN STEWART  
EASTON, MD.

Typical of QUIET MAY  
estate installations made  
by Hardcastle & Forney,  
Inc. on Maryland's  
Famous Eastern Shore.



Thank you, Mr. Hardcastle! That tells men interested in an oil burner franchise a few of the things they want to know about QUIET MAY. The rest they can get by writing direct to:

NEW BUSINESS DIVISION •• MAY OIL BURNER CORPORATION •• BALTIMORE, MD.

**QUIET MAY**  
AUTOMATIC OIL BURNER



## Export Information On Portuguese East Africa

### Refrigeration Market Limited By Lack of Electric Power Plants

By W. Quincy Stanton  
American Vice Consul

Lourenco Marques, Portuguese East Africa

THE market for electrical refrigerating equipment in the Colony of Mozambique (Portuguese East Africa) has only recently been developed and must necessarily remain on a rather small scale in the near future as it is restricted by two basic factors, namely: (1) The paucity of electrical power; (2) The small civilized population.

Electric current for power and lighting purposes is available only in a few towns in the colony—principally Lourenco Marques, Beira, Mozambique, Inhambane and Vila de Joao Belo (otherwise known as Chai Chai or Vila Nova de Gaza), on the estates of the leading plantation companies and at some of the government administrative posts in the interior of the colony.

It is not always available continuously at all of these places as some of the power plants only operate during the evening hours.

As for the population, only about 1 per cent may be considered as civilized; this small fraction numbering about 40,000 people, is composed of the whites, Asiatics, "colored" persons (mixed bloods), "assimilated" natives (civilized negroes with the legal status of whites) and finally some of the kaffirs (native negroes) residing in and around the principal urban areas.

The remaining 99 per cent of the pop-

ulation, numbering almost 3½ millions, is made up of the indigenous kaffir population, most of which lives in the interior under quasi-jungle conditions.

Furthermore, the bulk of the civilized fraction is not financially able to purchase either electrical or mechanical machines.

However, there is an increasing interest on the part of the more prosperous elements of the civilized faction, and there is also some demand from among the hotels and commercial establishments in the leading towns, the government for its military and civil administrative posts, and the large plantation companies for their managers and technical employees.

#### List of Firms

No responsibility is assumed by this American Consul as to the business standing of the persons and firms named below. Credit reports can be had from American banks specializing in foreign business or from commercial reporting agencies.

These names have been furnished by the American Consul at Lourenco Marques, Portuguese East Africa American Consular Officers at any foreign city will furnish such names directly to any American firm or any individual addressing them.

Circles indicate relative size of concern: 0—Small; 00—Medium; 000—Large; 0000—Very Large. W—Wholesaler; R—Retailer; M—Manufacturer; I—Importer; E—Exporter; CM—Commission Merchant; SA—Sales Agent.

Allen, Wack & Shepherd, Ltd. Rua Alexandre Herculano (P. O. Box 2) Lourenco Marques. 000—W.R.I.E., CM, SA of agricultural machinery, general merchandise, groceries, hardware, timber, etc.

Allen, Wack & Shepherd, Ltd., P. O. Box 270, 280 and 290, Beira, P.E.A. 000—(See above).

Tarmahomed Haji Adamjee, P. O. Box 50, Mozambique, P.E.A. 000—I.W.R. CA of textiles, piece goods, cutlery, hardware, produce.

Anglo-African Trading Co., Ltd., Beira, P.E.A. 00—I.R. of agricultural machinery, building material and liquors. Head office, London.

Beira Port Works, Ltd., P. O. Box 17, Beira, P.E.A. 0000—Public Utility Corp. handling the Port works at Beira under the jurisdiction of the Chartered Company of Mozambique registered in London, England, as a limited liability company in 1926.

Companhia do Boror, P. O. Box 4, Lourenco Marques. W.R.I. 000—E. General importers and exporters of produce, soft goods. Insurance shipping and forwarding agents; plantation owners.

Companhia, Colonial do Buzi. Nova Luzitania, Beira, P.E.A. 0000—Sugar cultivators, manufacturers of white and raw sugar for export and by-products, alcohol, copra, ivory, lime, maize, cattle breeders; cement dealers.

Breyner & Wirth, Ltd., P. O. Box 206, Lourenco Marques. 000—General merchants. Financial estate and shipping agents.

Barbosa & Cia. A. 51, Rua Consiglieri Pedroso, Lourenco Marques. 000—W.R.I. of chemicals and drugs, patent medicines, toilet preparations, rubber goods, bottles, all chemists supplies.

Bridler & Co., Ltd., F., P. O. Box 65, Lourenco Marques. 000—W.I.R. of groceries, canned foodstuffs, candy, novelties, toys, Ford distributor, etc.

Correia & Martins, Ltd., P. O. Box 373, Lourenco Marques. 0—I.W.R. of hardware, paints, oils and household goods, etc. No. of employees, 4.

Catoja, Saldanha & Cia., Ltda. Rua Consiglieri Pedroso, Lourenco Marques. 00—I. of general hardware, enamelware, paints, tools, machinery, stoves, glassware, etc.

Raul de Carvalho, P. O. Box 33, Lourenco Marques. 00—W.R.I. of hardware and tools; building materials; electrical goods.

Consolidated East Coast Engineers, Ltd., P. O. Box 198, Lourenco Marques. 000—Jobbers, W.I. Marine, electrical and general engineers, builders and contractors; boiler makers, coppersmiths, iron and brass founders. Handle hardware and machinery.

Martha da Cruz & Tavares, Ltd., P. O. Box 318, Lourenco Marques. W.R.I. 00—SA of bicycles, automobiles, trucks, tractors, etc. Porto wines, straw and felt hats, toilet preparations, preserved foodstuffs, automobile tires and tubes.

Cotton Plantations, Lt., Chagalane Estate, Goba, Lourenco Marques, P.E.A. 000—W.E. producing cotton and ground nuts.

Delagoa Bay Agency Co., Ltd., P. O. Box 796, Lourenco Marques. 000—W.I.E. CM SA. Landing, shipping and forwarding agents. Insurance agents. Own private yard with bonded sheds and saw mill.

Delagoa Bay Development Corp., Ltd., Capitania Bldgs., Lourenco Marques. 00—W.R.I. Water, power, electric light and tramway company. Also sell electric lamps and equipment.

Delagoa Plantations, Ltd., Magude, via Lourenco Marques. 000—W.E. of citrus fruit, chiefly grapefruit and oranges. Plantation owners.

Empresa Industrial Edificadores, Ltda., Box 53, Lourenco Marques. 000—I. Builders and contractors. Owners of stone

quarries and brick and tile factory. Established 1902.

P. Santos Gil, Ltda., Avenida da Republica, Lourenco Marques. 000—Import and Export Merchants. Timber merchants, contractors, builders, electrical engineers. Oil manufacturers.

Elias Hazis (Pastelaria Internacional) P. O. Box 143, Lourenco Marques. 00—I.W.R. baker, confectioner, tea room.

Hunt, Louchars & Hepburn, Ltd., Rua Araujo, Lourenco Marques. 0000—I.W.R. of building materials, timber and hardware.

Hillman Bros., Ltd., P. O. Box 784, Lourenco Marques. 0000—I.W.R. of timber and general hardware.

Incomati Estates, Ltd., Xinavane, P. E.A. 000—W.E. of sugar. Growers of cane sugar and owners of large sugar factory.

Lourenco Marques Forwarding Co., Ltd., P. O. Box 795, Lourenco Marques. 0000—W.I.E. CM for timber, building materials, cement, galvanized iron, grain bags, iron and steel goods, groceries. Landing, shipping, and forwarding agents. Insurance agents.

Adriano Maia, 85, Rua Araujo, Lourenco Marques. 00—I.W. CM, handling electrical goods, industrial, railway, scientific apparatus and engineering supplies. Exporter of local products.

Societe du Madal, Bobone, Bonnet & Cie, Quelimane P.E.A. 000—I.W.R. of general merchandise, coconut planters producing copra. Exporters of local products.

J. Martins Marques, Ltda., P. O. Box 166, Rua Consiglieri Pedroso, Lourenco Marques. 00—I.W.R. of electrical goods, machinery, gramophones and photographic goods, tools, etc.

E. A. Mendonca, P. O. Box 851, Lourenco Marques. 00—CA. for general merchandise.

Mozambique Industrial & Commercial Co., Ltd. Sisal plantations, Chupanga, P.E.A. (via Vila Fontes). 0000—Agriculturists, sisal and cotton growers.

William Monk, P. O. Box 18, Vila Pery, P.E.A. 00—I.R. of automobiles and sundries. Agricultural implements.

Namagora Plantations, Ltd., Alto Lugella (mail address, Mocuba, Portuguese East Africa). 000—Agricultural plantations and dealers in motor cars, lorries, fuels and oils, kaffir truck, cotton goods, etc.

William Phillip & Co., P. O. Box 356, Beira, P.E.A. 000—I.W.E. CM. handling general merchandise.

Premier Cotton Estates of South Africa, Ltd., Moamba, near Lourenco Marques. 0000—Cotton cultivators. Exporters.

Rhodesia Trading Co., P. O. Box 7, Beira. 000—General merchants, hardware, groceries, liquors, clothing, boots, drapery, stationery, forwarding agents; insurance agents, outfitters. Provisions.

Ribeiro & Levy, Ltd., 64-70 Rua Araujo, Lourenco Marques. 00—I. CM SA for railway materials, rolling stock, building materials, cement, iron and steel goods, cottons, typewriters, etc.

J. A. Serrinha, Ltda. Successor, Box 34, Chinde, P.E.A. 00—R.I.E. of groceries, hardware, paints, timber and stationery.

Sena Sugar Estates, Ltd., Mopeia, P. E.A. 0000—Own sugar plantations and factories.

F. L. Simoes & Co., Beira, P.E.A., P. O. Box 13. W.R.E. 00—General merchants. Handle fishing tackle, groceries, provisions, arms and ammunition; iron-mongers, stationers.

Spence & Weedon, Ltd., P. O. Box 106, Lourenco Marques. 000. I.W. 000—CM SA handling rice, flour bags, cotton, general hardware, shipping and forwarding agents.

Joao Ferreira dos Santos, P. O. Box 1, Mozambique, P.E.A. 00—I.W.R.M.E. CM SA handling local products, such as mangrove bark, sisal, copra, etc. Own sisal, coconut and tobacco plantations.

Jacques Salm & Co., P. O. Box 93, Lourenco Marques, P.E.A. 000—I.W.R. of general merchandise. Exporter of local produce.

G. B. Buccellato Valentim & Cia, Rua Consiglieri Pedroso, Lourenco Marques. 00—I.W.R. of hardware, glassware, paints, oils and varnishes, building material, cutlery, etc.

Victoria Cold Storage & Ice Factory, Ltd., P. O. Box 83, Lourenco Marques. 000—I.W.R. M. general merchants, shipchangers, M. of ice. Established 1918.

Vidago & Co., P. O. Box 222, Lourenco Marques. P.E.A. 000—I.W.R. of general merchandise. Reputation very good. Netting, building material, glassware, iron-mongery, earthenware, brushware, crockery, stationery, electrical goods, brass goods, agricultural and other machinery, cordage and rope, hardware, pumps, lamps, paints, lubricating oil and greases.

Vulcan Ironworks, P. O. Box 772, Lourenco Marques, P.E.A. 0—Engineering repairs. I.

Companhia da Zambesia, Quelimane, P.E.A. 0000—W.R.I. of native trade goods, engineers, stores, building material, cotton goods, hardware, oils, greases, rice, petrol, etc. M. of sisal.

### REFRIGERATION WINS FAVOR IN EUROPE

DAYTON, Ohio.—Use of electric refrigerators and electrical refrigeration equipment has increased tremendously in Europe during the past two years, according to H. F. Dieter, European advertising manager of Frigidaire Corp., who is visiting the factories here.

"In many countries, notably Ireland, Scotland, Switzerland, Sweden, Greece, Holland, Algeria and Austria," he said, "the business of Frigidaire Corp. so far this year has exceeded that for the corresponding period of 1930."

"For years the major portion of Frigidaire business in Europe consisted of the sales of refrigeration equipment for commercial purposes, such as food shops, markets, hotels and restaurants. Today, however, the larger volume of our business is made up of household refrigerator sales."

"Ice cream, the popular American confection, is gaining greatly in popularity in Europe. One French manufacturer today is advertising it by its American name, 'ice cream.' A large demand has been created for ice cream cabinets, and Frigidaire's business with this product is increasing steadily."

"Apartment house refrigeration also is finding favor in Europe, and today many architects are specifying electrical refrigeration in the original plans for new apartments."

### SUPERFEX REFRIGERATOR DISTRIBUTED IN SOUTH

CLEVELAND.—Distribution has been arranged in approximately 225 places, chiefly in the southern and middle-western parts of the country, for the Superfex gas or kerosene burning refrigerator manufactured by the Perfection Stove Co.

National advertising has appeared in farm and women's magazines since the first of the year, according to sales officials of the company, and is chiefly directed to people who want refrigeration, and have no electric power in their homes.

### RUTH JOINS SUPERIOR OIL BURNER SALES CO.

WORCESTER, Mass.—John H. Ruth, former sales director for the Fowler Oil Burner Co., has joined Harry Wilson in the Superior Oil-Burner Sales Co.

The company will market a stove and range burner and a single 6-in., 9-in., and 12-in. burner. The burners will also be assembled in clusters of three and four. Mr. Wilson was formerly distributor for the Nu-Way Corp.

### PEN-MAR CO. TO DISTRIBUTE NERCO WATER COOLERS

BALTIMORE.—Pen-Mar Co., Inc., distributor for M. & E. electric refrigerator, manufactured by the Merchants & Evans Co., Philadelphia, has been appointed sole distributor in this market for the Nerco electric water cooler, product of the Nerco Cooler Corp., New York. The Nerco concern formerly maintained a direct factory branch.

### APEX INTRODUCES WASHER SELLING FOR \$129.50

CLEVELAND.—Announcement of an Apex all-porcelain two-tub wringerless washer selling in eastern United States for \$129.50 has been made by R. J. Strittmatter, vice president in charge of sales of Apex Rotarex Corp.

"An Address of Distinction"



Greater Value  
... Too

LIGHT, airy and spacious rooms, luxuriously appointed... tempting foods. Overlooking the quiet shores of Lake Michigan... quickly accessible to vacation pleasures and business activities. Value-for-your-money in every detail of service. Rates begin at \$4 a day. Permanent Suites at Special Discounts.

THE  
**DRAKE**  
HOTEL, CHICAGO  
Under Blackstone Management



Wire me  
at the HOTEL  
FORT SHELBY

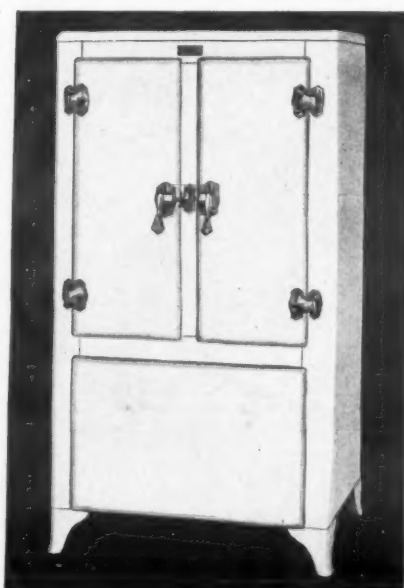
... is a doubly significant remark. Certainly it's final instructions to the office ... but the staff remember that the boss has stopped at the Fort Shelby since his initial visit to Detroit. 4 Hotel Fort Shelby's preferred location ... inviting lobby ... beautiful, commodious rooms ... superb restaurants and attractive rates are a few reasons why the major percentage of its patronage represents repeat business. 4900 units ... all equipped with servitor and private bath. Rooms as low as \$3.00 per day ... suites \$10.00 and upwards.

Motorists are relieved of their automobiles at the door without service charge. Write for free road map, and your copy of "Aglow with Friendliness," our unique and fascinating magazine.



HOTEL Fort  
Shelby  
E. J. BRADWELL, Manager  
DETROIT

"AGLOW WITH FRIENDLINESS"



Style "O"  
One of three models of utmost distinction

Each carries a  
**3½**  
Year Guarantee

THE STARR COMPANY  
RICHMOND INDIANA

**STARR**  
**FREEZE**  
Electric  
Refrigerators

BEAUTY

RELIABILITY

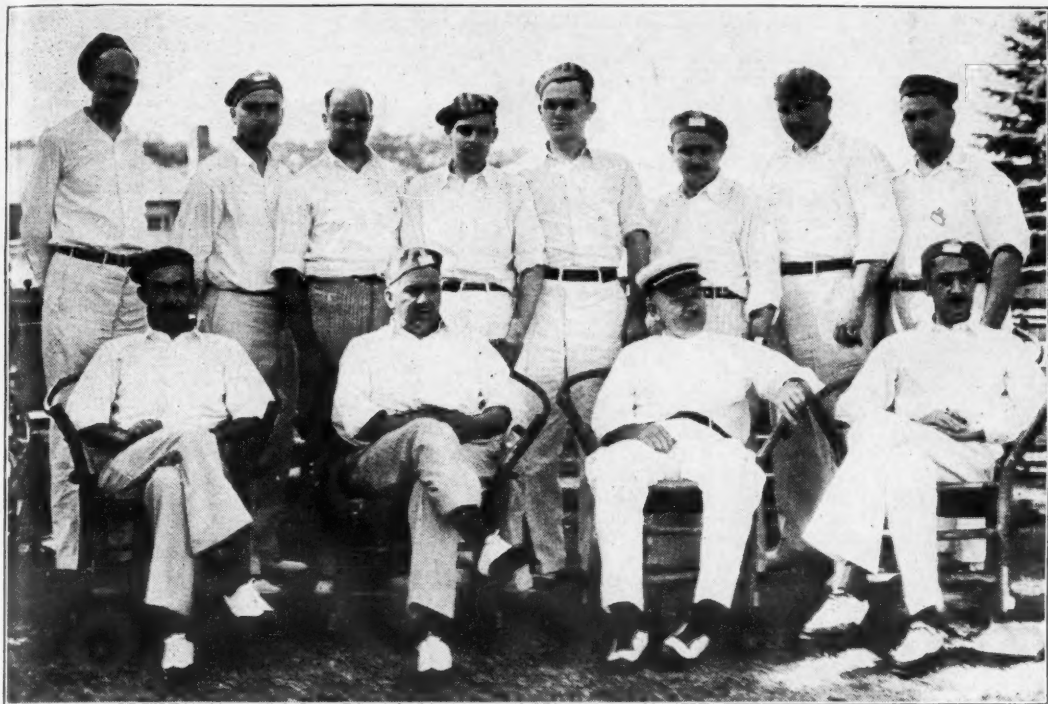
VALUE

Write for Our Liberal  
Dealer Proposition



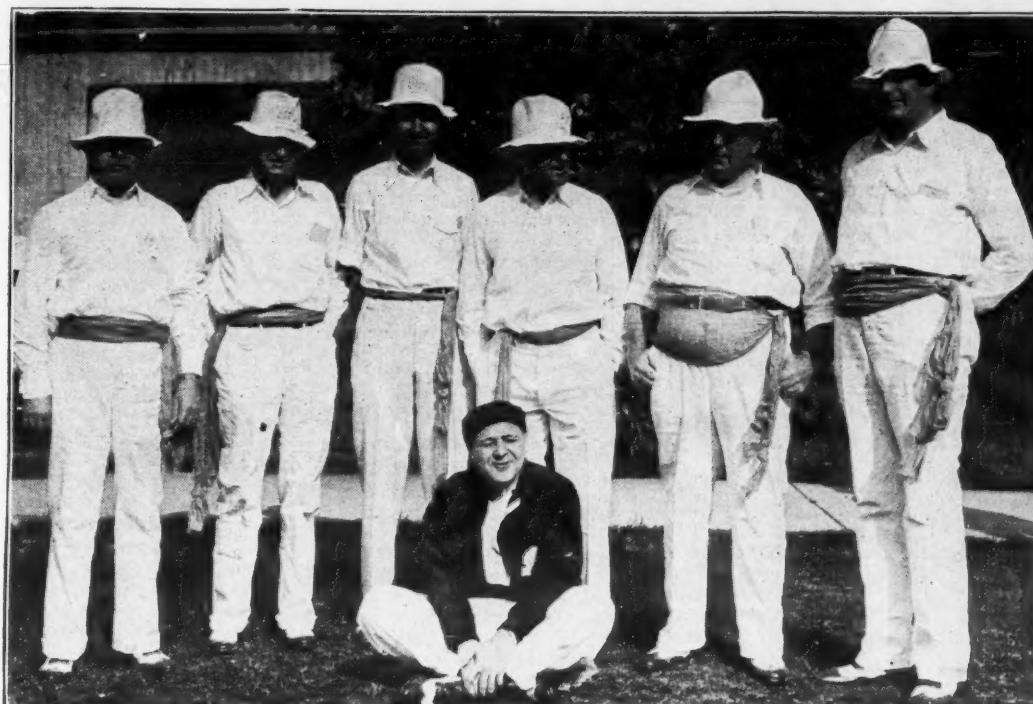
# G. E. DISTRIBUTORS CONFER, FROLIC AT CAMP

## Page-Morris Key Men



Officials and leading salesmen of the Albany, N. Y., distributing organization.

## Judson C. Burns and Cohorts



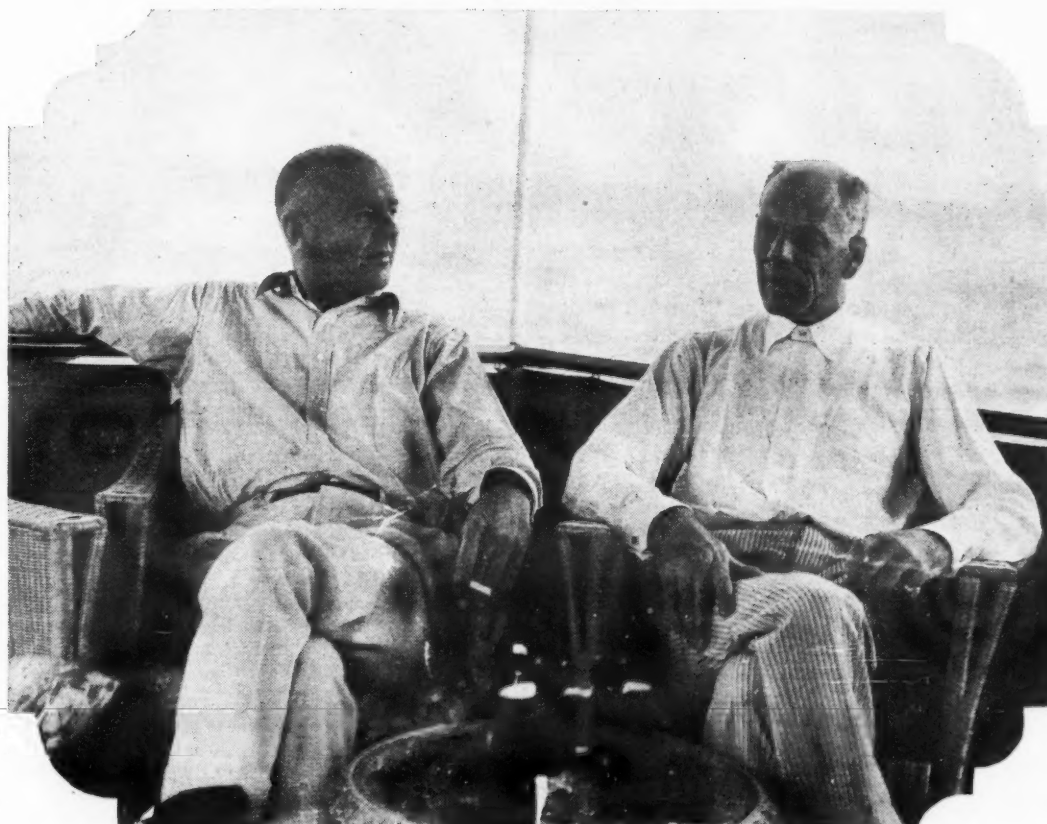
The Philadelphia distributor (third from right), lines up with his men.

## A-Yachting We Shall Go

### Archery



Fred Harvey (rear), watches Walter Daily try one of the Vice Squad's little persuaders.



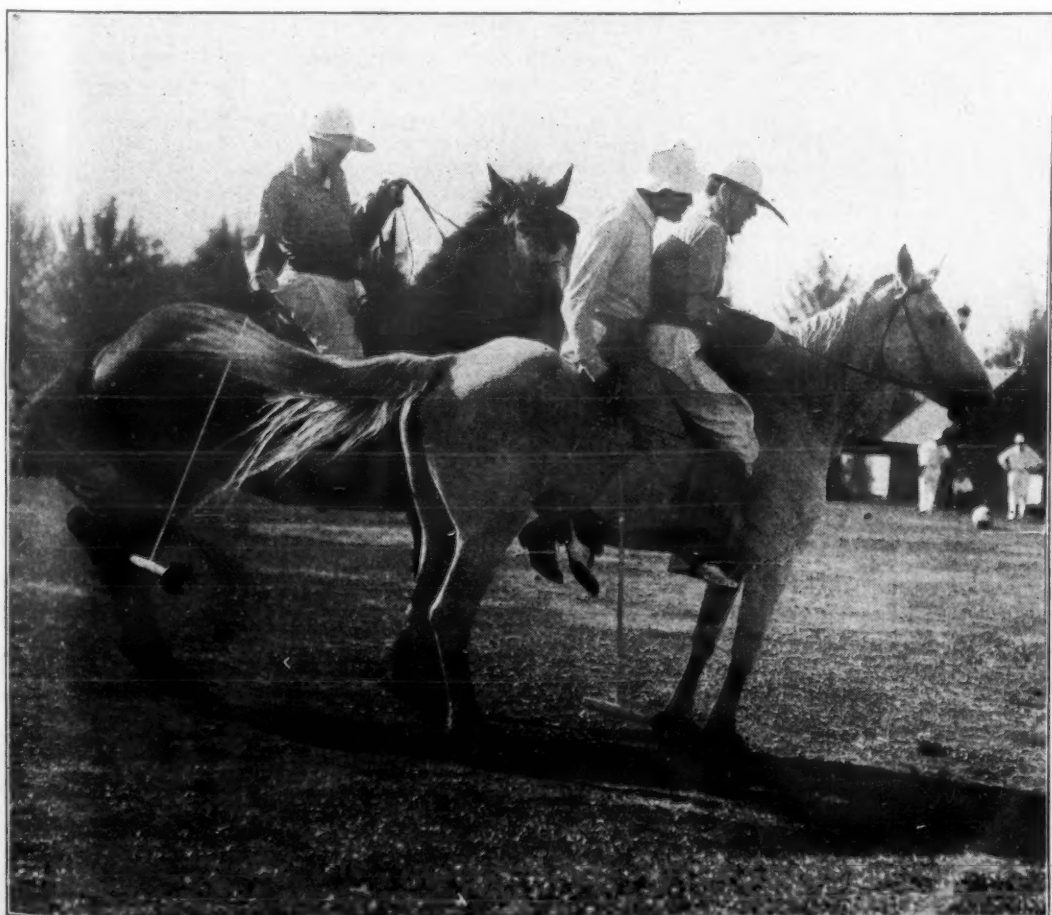
Syd Caswell (left), and Rex Cole on the latter's yacht.

### Vicer



Chuck Gentsch wears the Robin Hood uniform of the Vice Squad (camp police).

## Tense Moment in Polo Game



A polo game between six distributors provided great hilarity.

## Waiting for Mess Call



Chris Steenstrup and J. O. Morris (left pair), listen for the bugle.



## Requests for Information

Readers who can be of assistance in furnishing correct answers to inquiries, or who can supply additional information, are invited to address ELECTRIC REFRIGERATION NEWS, mentioning query number.

### Ratchet Wrenches

Query No. 474—Kindly advise us the names and addresses of manufacturers of small ratchet wrenches such as are used for turning the stems of shut off valves, having a 1/4 in. square shank.—E. S. Lape, sales manager, Kulair Corp., Philadelphia, Pa.

### Refrigerated Trunk Lines

Query No. 475—We would like to get the names of truck lines operating refrigerated trucks in New York, Ohio, Michigan, Pennsylvania, New England states, and along the Atlantic coast.

### Spanish Books

Query No. 476—I would like to obtain the Spanish names of the various parts of household refrigeration units and also the names in Spanish of the various tools used by the repair men. I would also like to secure an authoritative book in Spanish on the principles of household refrigeration.

Query No. 477—Can you tell us the gas charge necessary, the amount of oil required, and the changes to be made in changing the refrigerator formerly manufactured by the American Electric Corp. of New York City from a sulphur dioxide system to a methyl chloride system?

### Manufacturer of Trupar

Query No. 478—Would you furnish us with the name and address of the manufacturer of Trupar electric refrigerators?

Answer—Trupar Mfg. Co., 140 Davis St., Dayton, Ohio.

### Dry-Ice Companies

Query No. 479—Can you advise the writer of the various concerns that are

manufacturing carbon dioxide besides Dry Ice Corp.?

Query No. 480—I understand there is a small machine on the market that is producing dry ice or carbon dioxide in small quantities. Would you furnish me with the names and addresses of makers of such machines?

### "Zero Tube" Manufacturer

Query No. 481—Will you kindly inform me who manufactures refrigeration low sides known as "Zero Tubes?"

Answer—Copeland Products Corp., Mt. Clemens, Mich.

Query No. 482—Will you kindly advise us the names and addresses of manufacturers of perforated tubes or perforated cartridges to hold calcium chloride to reduce condensation between lights of glass in refrigerator display counters?

### Odor Removers

Query No. 483—What is the method for removing odors from new refrigeration cabinets?

Query No. 484—Where can repair parts be purchased in Philadelphia or vicinity for the "Ice Maid" refrigerator, which we are under the impression has been made by the Rice Electric Co., Detroit?

Answer—Made by Lamson Co., Syracuse, N. Y. Machine has been off the market for several years.

Query No. 485—Would you be kind enough to send me the name of the manufacturers of the special oil used in Belding-Hall compressors as the oil on the market is too thin to be used?

### Electric Parts

Query No. 486—Where can parts be

secured for the "Electrice" refrigerator? Answer—Deissler Machine Co., 31 N. Mercer St., Greenville, Pa.

### Ice Cream Packages

Query No. 487—We are anxious to get information on any manufacturers of ice cream who package their product in a carton made to fit either in the tray or the sleeve of an electric refrigerator.

Answer—Fred Sanders Co., 2465 Woodward Ave., Detroit, and Good Humor Ice Cream Co.

Query No. 488—I would like to secure some information on ice cream manufacturing and storing equipment.

Answer—Universal Freezer Corp., 1113 Penn Ave., Pittsburgh, Pa.

Query No. 489—Is the Bryant Electric Refrigerator Corp. still located at New Milford, Pa.?

Answer—Yes.

Query No. 490—Where can I buy a small rotary pump that will circulate from five to six gallons of water per minute? It should have a spider frame to permit attaching to the head of a 1/4 or 1/3 hp. standard Westinghouse or General Electric motor. The rotor should be propelled by the extended shaft of the motor, and be tapped for 3/4 or 1 in. outlet from a milk cooler.

Query No. 491—Would you furnish us with the names of books on milk cooling, fountain conversion, room cooling, and related subjects?

## ANSWERS TO BACK QUERIES

Query No. 423—Can you give us the name of manufacturers of equipment for dehydrating and sealing seamless copper tubing as used in the refrigeration industry?

Answer—Despatch Oven Co., Minneapolis, Minn., manufactures oven equipment in all capacities for dehydrating refrigerator units.

## LITERATURE OF MANUFACTURERS

Catalogues, bulletins and other material recently issued.

Manufacturers are requested to send copies of new trade literature to Electric Refrigeration News.

### Superflex Refrigerators

The Perfection Stove Co., Inc. of Cleveland is issuing a 15-page booklet of information on the Superflex oil burning refrigerator. It contains first a non-technical discussion of oil burning refrigeration in general, then full-page illustrations of the four Superflex models, followed by specifications of the units. The last two pages of the catalog concern the Superflex milk cooler, and various Superflex refrigeration accessories.

### Inco Products

Another issue—volume 10, number 4—of Inco, publication of the International Nickel Co., Inc., of Copper Cliff, Ontario, and New York City, is off the press and in readers' hands. It contains a number of articles on metal products, and devotes a special section to an official introduction of the new Monel metal kitchen sinks, now being offered in 10 models and six sizes by this company.

### Nickel, Chrome Brass

The American Nickeloid Co. of Peru, Ill., is circulating a diminutive yellow folder, on the inside of which are two samples of the concern's products—nickel brass and chrome brass. At the side of these samples are paragraphs pointing out the uses for such materials, while on the back of the folder is a list of other of the company's "finished raw materials," and a number of fields in which these products are in use today.

## RICE NAMED SALES MANAGER OF HAVEN COMPANY

MILWAUKEE, Wis.—F. C. Rice has been appointed sales manager for the Haven Mfg. Co. of this city, makers of units for milk coolers.

## New York City is a Market of 6 Million People at Your Delivery Platform

### Build Where People Spend

An ideal factory ready equipped for manufacturing showcases or household boxes—125,000 sq. ft.—seven stories—lumber yard of 8,000 sq. ft.—annexed—low cost Power Plant—three elevators—concrete—200-pound floor load—19-foot ceiling—first floor—11' 6" upper floors—kilns—blowers—wood working and metal machinery—office and show rooms. Ideal set up for the electric refrigeration business.

### Be the First in New York City

This plant has perfect shipping facilities near all railroads and SS lines. Export is the next big move for refrigeration. Situated on the west side of New York—Upper Forties.

Will Sell—Rent—or Cooperate

Apply to Box No. 357

## THE CONDENSER

ADVERTISING RATE fifty cents per line (this column only). SPECIAL RATE if, paid in advance—Positions Wanted—fifty words or less, one insertion \$2.00, additional words four cents each. Three insertions \$5.00, additional words ten cents each. All other classifications—fifty words or less, one insertion \$3.00, additional words six cents each. Three insertions \$8.00, additional words sixteen cents each.

REPLIES to advertisements with box numbers should be addressed to the box number in care of Electric Refrigeration News, 555 Maccabees Building, Detroit, Mich.

### POSITIONS AVAILABLE

SALES MANAGER—Refrigeration dealer in live Pennsylvania territory, two hours from Philadelphia, has opening for sales manager who can organize and train a sales force and who has executive ability to do a real job. Opportunity for a steady refrigeration man to grow into a profitable job as the product is the Westinghouse refrigerator which has already had a wide public acceptance. Applications should state experience in full, age and earliest date available. Address R. B. Cook, 1101 Race St., Philadelphia, Pa.

WANTED at once, by a large Electric Refrigeration Manufacturer marketing a complete line of commercial equipment, a man with Sales Promotion or Advertising experience, who understands Commercial selling. In reply give full details of age, experience, and salary expected. Our own organization has full knowledge of this advertisement. Box 359.

REPRESENTATIVE in several states to sell a complete line of valves, fittings, motor brushes, belts, tube, tools, etc., to electrical and gas refrigeration manufacturers, distributors, dealers, service organizations, etc., on a liberal commission arrangement. Box No. 358.

EASTERN refrigerator manufacturer, financially responsible, desires services of engineer, on salary plus royalty basis, who has perfected and is ready to have manufactured an absorption type unit operated by gas. We are also in the market for a perfected electric or otherwise operated air cooler for retail stores and homes. Give complete details. All replies held strictly confidential. Box No. 360.

### POSITIONS WANTED

AN ambitious, experienced electric refrigeration sales engineer wishes to become connected with live, aggressive distributor where hard work and an honest effort will win promotion. Can furnish both distributor and factory references. Thoroughly acquainted with sealed or conventional type units. Box 361.

### MISCELLANEOUS

SECOND and Greater INTERNATIONAL PATENT EXPOSITION, Merchandise Mart, September 14 to 27, Chicago, will be visited by 300,000 people including thousands of distributors, dealers, retailers and general salesmen. Booths or space available at the rate of \$1 per square foot. Minimum space 30 feet. Opportunity is offered to business firms to have their display here or have their literature distributed. Very small cost. Send for folder. B. Hamilton Edison, Director, Merchandise Mart, Chicago.

### BUSINESS OPPORTUNITY

BUSINESS OPPORTUNITY—We wish to sell outright, or in part, fully equipped manufacturing plant now operating and filling orders. We now manufacture a complete line of domestic and commercial compressor units which have been proven by four years marketing. In order to handle our 1932 volume, on a newly developed sealed domestic unit, we must organize completely within 60 days. Address Box 351, Electric Refrigeration News.

# To Help Dealers and Salesmen Sell Commercial Refrigeration

## Use REFRIGERATED FOOD NEWS To Stimulate Interest Of Commercial Prospects

Every concern selling commercial refrigeration is offered an effective sales promotional medium in REFRIGERATED FOOD NEWS, to be published every month beginning September 1.

REFRIGERATED FOOD NEWS (published for 16 months as the *Refrigerated Food Section* of ELECTRIC REFRIGERATION NEWS) is designed for food producing, food selling and food service establishments.

To such companies it will point out big opportunities in terms of "more profits through better refrigeration."

You—as a dealer or salesman—will benefit by seeing that REFRIGERATED FOOD NEWS reaches your prospects for commercial equipment. It will bring to them the experiences of food merchants and food service establishments which have installed modern refrigeration equipment. It will tell how bigger profits have been made by using proper refrigeration methods.

Arrange now to see that your prospects receive REFRIGERATED FOOD NEWS regularly. Provide your salesmen with copies for distribution or order the paper mailed direct to prospects.

## Order for REFRIGERATED FOOD NEWS

REFRIGERATED FOOD NEWS,  
550 Maccabees Bldg., Detroit, Mich.

☐ Please send REFRIGERATED FOOD NEWS for ... months to names listed below. (10c per single copy or \$1.00 per year.)

☐ Check. ☐ P. O. Order. ☐ Cash enclosed.

Company .....

Attention of .....

Address .....

(Write additional names on separate sheet.)

### Use This Section for Bulk Order to One Address

☐ Please send to address below ... copies of REFRIGERATED FOOD NEWS for ... months. (10c per single copy or \$1.00 per year.)

☐ Check. ☐ P. O. Order. ☐ Cash enclosed.

Name .....

Street .....

City and State .....

## SUBSCRIPTION ORDER

Electric Refrigeration News  
550 Maccabees Building  
Detroit, Michigan

.....1931

Gentlemen: Please enter my subscription to ELECTRIC REFRIGERATION NEWS.

United States and Possessions: ☐ \$2.00 per year ☐ Three years for \$5.00  
All other Countries: ☐ \$2.25 per year ☐ Two years for \$4.00

I understand that ELECTRIC REFRIGERATION NEWS, which has been issued every two weeks, will be issued every week beginning Sept. 9, 1931.

I also understand that the *Refrigerated Food Section*, which has been Part II of each issue, will become a separate publication to be issued once a month beginning Sept. 1, 1931, but that I will receive the new paper, REFRIGERATED FOOD NEWS not to exceed one year without extra charge, provided my order or renewal is mailed on or before Sept. 30, 1931.

I am enclosing payment in the form of ☐ Check ☐ P. O. Order ☐ Cash

Name .....

Attention of  
or Care of .....

Street Address .....

City and State .....

### Special Rates for Group Subscription Orders

For paid-in-advance subscriptions in United States only. Send check with order. Charge orders are billed at the full rate, regardless of number. Papers will be mailed to individual addresses. This offer expires December 31, 1931.

5 or more subscriptions entered at one time, \$1.75 per year each.

20 or more subscriptions entered at one time, \$1.25 per year each.

10 or more subscriptions entered at one time, \$1.50 per year each.

50 or more subscriptions entered at one time, \$1.00 per year each.

NOTE: The above reduced rates will not apply to orders received after December 31, 1931.



## ELECTRIC REFRIGERATION NEWS

Registered U. S. Patent Office

The business newspaper of the refrigeration industry

ISSUED EVERY TWO WEEKS  
VOL. 5, No. 26, SERIAL No. 128Copyright, 1931, by  
Business News Pub. Co.

DETROIT, MICHIGAN, AUG. 26, 1931

Entered as second class matter  
Aug. 1, 1927, at Detroit, Mich.FIFTEEN CENTS PER COPY  
TWO DOLLARS PER YEARDETROIT NAMES  
GROUP TO STUDY  
STANDARD CODEPresent Ordinance May  
Be Replaced By  
A. S. A. Code

DETROIT—Efforts to revise the existing safety code for mechanical refrigeration in this city came to a standstill, Aug. 18, at the second meeting called by Commissioner Joseph P. Wolff of the Department of Buildings and Safety Engineering, when representatives of refrigeration and ice companies, and real estate firms voted to consider the Standard Refrigeration Code for Mechanical Refrigeration sponsored by the American Society of Refrigerating Engineers.

A. G. Loeffel of the Detroit City Service Co., who led the assault on one of the proposed amendments, calling for the licensing of Class "A," "B," "C," and "D" refrigeration engineers, drafted a motion asking that a committee be appointed to study the code prepared by the American Society of Refrigerating Engineers and approved by the American Standards Association.

This committee, Mr. Loeffel proposed, should ascertain, if all or portions of the standard code, with additions or changes, should be recommended to the city council for adoption, in place of the present refrigeration ordinance. The committee will report its findings in the next 45 to 60 days.

Rallying to the support of Loeffel, O. F. Stauder of the York Ice Machine Co., Detroit, declared that Detroit needs a code that will cover number and size of relief valves, relief lines, fire lines, etc., on

WITTENMEIER TESTS OUT  
CARBONIC ROOM COOLER

CHICAGO—Test installations of the Wittenmeier room cooling unit, new product of the Wittenmeier Machinery Co. of this city, have recently been made in Ohio, according to officials of that company.

The unit uses the Wittenmeier direct expansion carbonic system, with a fan blowing the air across the finned coils and through director vanes into the room. A 1-6 hp. machine is used to each blower.

Although the present system is ready for commercial installation, further experimentation with the room cooling idea is being carried on with the end of creating a model for domestic purposes at a non-prohibitive cost.

Wittenmeier engineers believe that a system using a manual control rather than the automatic thermostatic type will find better application in office and domestic use.

Their design permits the operation of the unit by a button control which brings the unit into action whenever the room should feel "stuffy."

The cooling and dehumidifying of the ordinary-sized room can be accomplished in a fairly short time, and the room temperature kept at a proper point by the continued operation of the machine, engineers claim.

STARTS INDEPENDENT SERVICE  
COMPANY IN SEATTLE

SEATTLE, Wash.—Formerly with the service department of the Frigidaire Co. in Seattle, N. R. Schwartz has entered the electric refrigerator service business for himself in this city.

He services refrigerators for owners in Seattle and contiguous territory. His experience includes long association with the company mentioned in installation and servicing of both commercial and household units.

FUR STORE INSTALLS BAKER  
ICE MACHINES

OMAHA, Nebr.—The Baker Ice Machine Co. is installing a \$6,000 machine in the Haas Bros. Department store of this city, to be used for cooling the firm's fur storage rooms.

The equipment will also supply an air conditioning system for sales and fitting rooms in the store. The unit is of the ammonia type.

Truck Compressor  
Gets Power From  
Transmission

OAKLAND, Calif.—Motor Vehicle Refrigeration, Ltd., a local firm specializing in the manufacture of refrigerated motor trucks, recently built several trucks for the delivery of Borden's ice cream, in which the compressor was driven directly by a power take-off from the transmission. The trucks have capacity for 325 gallons of ice cream.

Neither an electric motor nor a gasoline engine is employed to furnish refrigeration motive power with this plan. The compressor is designed to operate at speeds varying from 200 to 2,200 r.p.m.

Power is taken from the transmission gears by a second drive shaft, from which it is belted directly to the compressor—built to use 1½ hp. The compressor runs with the truck motor whether or not the truck itself is in motion.

The compressor includes only eight moving parts, all submerged in oil, and has no valves or springs in it, according to W. D. Hatch of the Fourness Development Co., which controls the patents on the design.

The machine compartment, housing the compressor, condenser, gauges, expansion and control valves, and auxiliary electric motor, requires a space 27 in. wide and 30 in. long.

Where long lay-overs of the truck and a load of perishable foods is necessary, a 1 hp. electric motor will run the condensing unit by plugging in on central station current. In these instances, the

(Concluded on Page 4, Column 4)

ALL-STEEL REFRIGERATED  
BODIES MADE BY MAYER

PITTSBURGH—To prevent the addition of dead weight by "water logging" in bodies of their refrigerated trucks, engineers of the Mayer Body Corp., have designed an all-steel body frame. Most of the wood sections have been eliminated with the new frame, they claim, and the weight is reduced.

"Temperatures in the food compartment are maintained at any point between 45° F., and several degrees below zero," W. G. Mayer, president, says.

To gain good appearance, substructures of the trucks are concealed, and corners rounded. Stretcher level steel is used for the outside panels because it permits fast painting or lacquer. Insulation is of Dry-Zero, Kapok, or cork.

## Technician



Westinghouse recently named M. C. Terry chief refrigeration engineer.

RHINELANDER BUILDS  
CABINETS FOR DAYTON

RHINELANDER, Wis.—Rhinelander Refrigerator Co. will not go into the electric refrigerating machine business or market a complete unit, according to R. A. Riek, general manager. This company has, however, definitely turned its attention to the production of cabinets for mechanical refrigeration and expects to expand its output in this field in the near future.

Rhinelander is now turning out a larger order for Dayton Refrigeration Corp., recently purchased by National Pumps Corp., and has about 100 men working at the present time. This year the plant could not be shut down for the usual July inventory on account of the pressure for deliveries.

The plant is equipped to make 800 cabinets per day. All operations, including metal work and porcelain enameling, are done in the local plant.

The Rhinelander company takes pride in the finish of their cabinets. A modern electric furnace bakes the porcelain for

(Concluded on Page 2, Column 5)

Moisture Causes  
Most Cabinet  
Troubles

By F. M. Cockrell

ST. PAUL, Minn.—Most troubles with the refrigeration cabinet can be traced to moisture, according to G. R. Seeger who has charge of production at the Seeger Refrigerator Co., here.

"All insulation must be waterproofed unless it is enclosed in an air-tight box," he says, "and it is difficult to make a cabinet shell absolutely free from leakage. Even spot-welded seams of a cabinet are coated with asphalt, in the Seeger plant, to make them waterproof."

Dry-Zero is used for most cabinets which bear the Seeger name. Celotex is selected for designs which require a board form of insulation to give structural strength. Other brands are specified in some contracts for cabinets supplied to producers of complete units.

Some of the newer forms of insulation test out well, he says. Good results are secured with the new paper insulation developed by the General Electric Co. A lot depends, declares Mr. Seeger, on the application of insulation from a moisture-resistance standpoint.

Questioned about low-temperature display cases, Mr. Seeger again referred to moisture as the big problem.

"We think we have it licked now, but we are still experimenting," he said.

"A display case must be given the on and off test to determine its ability to withstand the attacks of moisture," he continued. "A case may test perfectly

(Concluded on Page 2, Column 4)

NEON TUBES GIVE COLD  
LIGHT FOR DISPLAY CASES

GRAND RAPIDS, Mich.—Control of the rights to Neon tubes for display case applications is owned by Grand Rapids Store Equipment Co., according to M. C. Burnside, manager of the refrigeration division, and the company is now working on a development which will permit the installation of the Neon rectifier outside of a refrigerated display case while the cold Neon tubes are placed inside.

By using tubes of three different colors in one reflector, a daylight effect may be obtained. The Neon tubes will have an important application in many types of display cases other than the refrigerated variety.

KELVINATOR PUTS  
NEW TYPE ROOM  
COOLER IN FIELDAir Conditioning Unit  
Built for Remote  
Compressor

DETROIT—Cabinet type room coolers for homes, offices, shops and other applications where it is desirable to temper the air to comfortable humidity and temperature, have just been announced by Kelvinator Corp. here.

The new room cooling unit consists of a one-piece steel cabinet, window-sill height, finished in hand-grained art metal, and housing the cooling coils, centrifugal fan, and controls. The exterior cabinet can be lifted off the air conditioning assembly for examination or adjustment.

Tests indicate that for ordinary office construction and usage, the cooler will produce a satisfactory temperature reduction and humidity control in rooms up to 300 sq. ft. of floor space, Kelvinator engineers claim.

Kelvinator condensing units R-31 (air-cooled) or WR-46 (water-cooled) models are recommended for use with the room cooler. Both of these are high suction pressure units. The condensing unit may be placed in any nearby location, with suction and liquid lines connected to the room cooler. The only other connection is that of a small drain line to carry away the moisture extracted from the air.

The water cooled condensing unit may be placed in the same room as the room cooler that is more convenient, but the air cooled unit should be placed as a remote installation since the condensing unit will discharge more heat into the room than the cooling unit can remove.

The cooling unit in the Kelvinator room cooler is of the dry system type, and consists of three rows of annular finned tubing in parallel with each other, connected at each end by a manifold.

(Concluded on Page 3, Column 1)

COMBINATION GAUGE SET  
MARKETED BY NEWCUM

ST. LOUIS—The combination gauge outfit described by K. M. Newcum of the Refrigeration Service Co., 4916 National Bridge Ave., here, on page 14 of the December 3, 1930, issue of ELECTRIC REFRIGERATION NEWS, is now being offered for sale by the accessories and parts department of that company.

The device consists of a high-pressure gauge, a compound gauge, and fittings for a service connection, and connections to the high and low sides of an electric refrigerator. It is designed for use by service men in adding refrigerant, adding oil, setting switches, by-passing from the high to the low side to raise the pressure for leak testing and purging, without removing either gauge.

KELVINATOR MANUFACTURING  
TWO NEW WATER COOLERS

DETROIT—Kelvinator is now in production on two new top bubbler pressure type water coolers, Model CW-80 and CW-83. The coolers have essentially the same cooling unit employed in Model CW-30, with an expansion valve setting of 6 lbs., and a normal temperature control setting of 49° cut-in and 43° cut-out.

Condensing unit Model C-11 is used in the Model CW-80, and has a capacity of 3½ gals. of water per hour cooled from 80° to 50°. Condensing unit Model L-21 is used in Model CW-83, and has a capacity of 6 gals. of water per hour.

Overall dimensions of the coolers are: width, 19 in.; depth, 14 in.; and height, 43½ in.

COPELAND WATER COOLERS  
PLACED ON BRIDGE

LOUISVILLE, Ky.—Copeland water cooling equipment provides cool drinking water in the toll houses of the new municipal bridge here.

This bridge boasts the distinction that President Hoover was the first to cross it. It was built at a cost of nearly \$5,000,000, provided by private capital.

## For Cool Decisions on Hot Days



Kelvinator's new room cooler tempers air to a comfortable humidity and temperature for office workers. A remote installation is made of the standard condensing unit.



### PATTERSON PUTS SERVICE MEN IN UNIFORM

MIAMI, Fla.—(UTPS)—George Patterson, Inc., here, has put all service and delivery men in uniform. The suit

is a neat coverall of brown with the words "General Electric Refrigerators" in red on the shoulder. The name of the wearer is embroidered in red over the pocket. Aside from creating a good impression on the public, this has been a good advertisement.

**Selected  
for its  
Performance**

**Simple  
Accurate  
Dependable**

## PENN Type J Unit Control

THE simplicity, the beauty, the performance of the Penn Type J Unit Control have won for it universal recognition in the electric refrigeration industry. Thousands are in use rendering perfect satisfaction on both domestic and commercial refrigerators produced by several of the largest and best known manufacturers.

You will find Penn Type J remarkably adaptable to your own units. It may be furnished for nearly every type of mounting arrangement, or in a number of combinations to meet your particular requirements.

The complete control provides:  
ONE DIAL CONTROL  
TEMPERATURE SELECTOR\*  
THERMAL OVERLOAD PROTECTION  
START AND STOP FOR DEFROSTING  
RANGE AND DIFFERENTIAL ADJUSTER

Type J may also be applied to sealed type machines, either as a combination unit, or as two separate units, using the standard Type J with a separate magnetic pick-up.

#### Free Engineering Service

Because of the wide application of Penn

\*This feature is protected by exclusive license to manufacture for resale under Frigidaire patents.

**PENN ELECTRIC SWITCH CO.**  
DES MOINES, IOWA

With Offices in the Following Cities

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Boston  
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Los Angeles

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Milwaukee  
Minneapolis  
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Barcelona, Spain

Buffalo  
Cincinnati  
London, Eng.  
Lyons, France  
Osaka, Japan

## DETROIT WILL STUDY A.S.R.E. SAFETY CODE

(Concluded from Page 1, Column 1)  
as the present regulations make no mention of these details.

Commissioner Wolff delegated H. Mills, chief safety engineer of the department, to direct the committee as chairman, and named George B. Bright of the G. B. Bright Co., A. G. Loeffel of the Detroit City Service Co. and L. C. Battdorf of the Detroit Real Estate Board, as members of this group. Representatives of both the engineers and property owners will also be members of this committee.

The proposed amendment to Section 15 of the Detroit refrigeration ordinance on licensing of Class "A," "B," "C," and "D" engineers was up for discussion at the second meeting. Mr. Loeffel states that as the proposed amendment now reads, he believes that no engineer in the country could pass a test for a Class "A" license covering all types of refrigerants.

Class "A" licenses were to cover the operation of refrigeration equipment of any capacity, Class "B," apparatus not to exceed 30 tons capacity, and Class "C," plants not to exceed 5 tons capacity.

Class "D" licenses proposed to cover all multiple refrigerating plants were heavily attacked on all sides. In a letter to Commissioner Wolff, R. C. Doremus, president of the Detroit Section of the National Association of Practical Refrigerating Engineers, denied that his organization was in the league with janitor associations and, he recommended that Class "D" licenses should be withdrawn.

At the first meeting called by Commissioner Wolff, the latter part of July, representatives of the real estate interests expressed disapproval of the proposed amendment to Section 5, covering permits for new refrigeration plants or changes. At that time, Glen Muffly, code

## Moisture Cause of Cabinet Troubles

(Concluded from Page 1, Column 4)

in the laboratory, and trouble may start after it is allowed to warm up."

Another example of the moisture problem is that of lacquer finish. Mr. Seeger is not fully convinced that any lacquer is good for real long life. He favors porcelain for exterior as well as interior finish. Bradley Vrooman and DuPont lacquers are used in the Seeger plant, and Mr. Seeger recognizes the popularity of lacquer finishes.

Again referring to low-temperature work, Mr. Seeger doubts the feasibility of using wood in any of the construction. He fears the effect of moisture. It is evident that Mr. Seeger has a cold and suspicious eye for any material that is not impervious to moisture.

consultant for the N. E. M. A., explained the provisions of the A. S. R. E., A. S. A. safety code.

The men in attendance passed a motion at that time, stating that they did not see any need for the proposed changes in Section 5.

Representatives attending the Aug. 18 meeting were: R. C. Doremus, George B. Bright Co.; C. L. LeClerc, Peerless Ice Machine Co.; B. G. Hyatt, Copeland Sales Co. of Detroit; L. A. Baird, Peerless Ice Machine Co.; E. E. McEwan, Frigidaire Sales Corp. of Detroit; R. A. Girwin, Pittmans & Dean Co.; A. J. Cordrey, Barin Bros.; A. G. Loeffel, Detroit City Service Co.; O. F. Stauder, York Ice Machine Co.; W. J. McDonald, Jr., and Frederick G. Gill, both of the Greater Detroit Builders Association; John Dittler, ELECTRIC REFRIGERATION NEWS; Theodore W. Weigle, Detroit City Gas Co.; Carl Wells, Homer Warren Co.; L. M. Culver, Employer's Association; C. C. Spreen, Kelvinator Corp., and John Dennis, National Association of Practical Refrigerating Engineers.

## PICK 3 DISTRIBUTORS FOR DESPATCH OVENS

MINNEAPOLIS—Distributors have been appointed in various sections of the country by the Despatch Oven Co. in its expansion program to extend the sale and service of industrial ovens and equipment.

Jones and Manter Corp., Boston, has been appointed district sales representative in the New England territory except western Connecticut, while F. C. Butman has been reappointed district manager of western New York. Mr. Butman is returning after a leave of absence during which he was efficiency engineer for Roneo, Ltd., Romford, Eng.

E. B. Wolf has been added to the Detroit office and handles the eastern Michigan and northwestern Ohio territory.

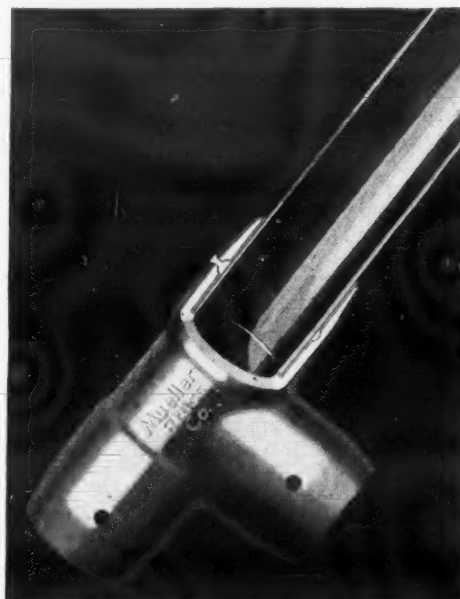
## RHINELANDER CO. MAKES DAYTON CORP. CABINETS

(Concluded from Page 1, Column 3)  
interiors so accurately that rejects are only a small fraction of one per cent.

They use a synthetic porcelain of their own development for exteriors. After spraying, the complete cabinets are put through a continuous drying oven which keeps them at a temperature of 250° F. for three hours.

Cork, Celotex, Firtex, and other insulations are found in considerable quantities in the stock rooms, but Insulite is being used in the present jobs. The Rhineland company has just placed an order for 3,500,000 ft. of Insulite.

Winters & Crampton hardware is being used for the Dayton cabinets, but the company is also a large buyer of Grand Rapids Brass hardware.



*A solder film makes  
a joint that is . . .*

## POSITIVELY SEEP-PROOF

Refrigerant leakage from joints in gas and liquid lines, from compressors to cooling units, play havoc with refrigeration installations. Another source of trouble is the freezing of condensation between tube and fitting.

A MUELLER PATENTED JOINT ELIMINATES THESE DANGERS.

A quick, visual inspection will tell when this patented joint is tight. Expansion will not work it loose nor will vibration affect it. The thin layer of solder spread, by the phenomenon of capillary attraction, evenly and quickly over the entire surface between the pipe and fitting, alloys with both metals. The result is a joint stronger than the tube itself.

Most refrigeration manufacturers use this patented joint. Some use it exclusively.

If you are not thoroughly familiar with the advantages of STREAMLINE products in a refrigeration installation, write, or wire us at our expense.

We also manufacture a complete line of valves and fittings and can supply your every requirement.

CANADIAN OFFICE - MUELLER BRASS CO. OF CANADA, LIMITED, TORONTO, ONTARIO

**Mueller**  
BRASS OF PORT  
CO. OF HURON  
MICHIGAN



STREAMLINE Coupling  
Copper to Copper  
Patent 1,770,852. Patent 1,776,502.  
Other patents pending.



STREAMLINE Coupling  
Copper to Outside I. P. S.  
Patent 1,770,852. Patent 1,776,502.  
Other patents pending.



STREAMLINE Tee  
Copper to Copper to Copper  
Patent 1,770,852. Patent 1,776,502.  
Other patents pending.



STREAMLINE Cross  
Patent 1,770,852. Patent 1,776,502.  
Other patents pending.



STREAMLINE Coupling  
Copper to Inside I. P. S. Thread  
Patent 1,770,852. Patent 1,776,502.  
Other patents pending.



## KELVINATOR DESIGNS ROOM COOLING UNIT

(Concluded from Page 1, Column 5)

fold. Two centrifugal type operating fans draw air in through an opening in the lower part of the front of the case, and force it up over the cooling unit and out through louvred openings in the top, into the room.

The louvres are so arranged that the direction of the air current is upward and outward, which tends to promote the maximum circulation of air in the room which is being cooled without directing a blast of air on anyone in the room, Kelvinator engineers point out.

Directly below the cooling unit is a drip pan which collects the moisture removed from the air by the cooling unit. The drip pan is provided with an adjustable overflow which permits regulation of the humidity of the air leaving the cooler. When the overflow is raised, thereby maintaining a quantity of water in the drip pan, a somewhat higher humidity is maintained.

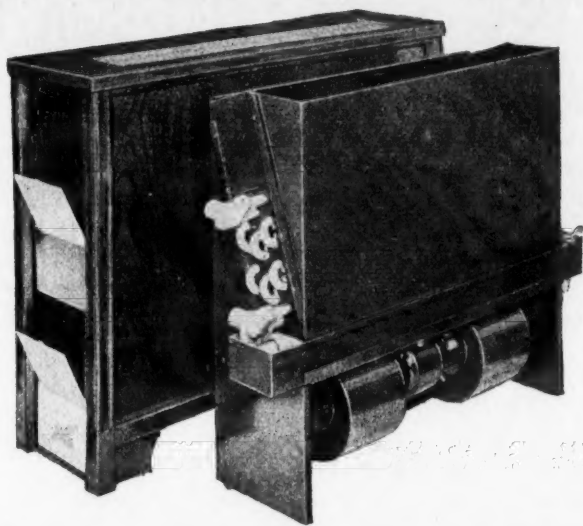
When the overflow is set at its lowest position, all the water is permitted to drain out of the drip pan and the humidity of the outgoing air is then reduced to its lowest point.

### Operation

The general operation and service of the room cooler is practically the same as for the Kelvinator dry system cross fin cooling unit with thermostatic expansion valve, except that in the room cooler the cooling unit operates at a higher suction pressure and, consequently, under normal conditions will not cause frost to form on any part of the cooling unit, it was explained.

The expansion valve, however, should be set to permit a slight sweating back on the suction line comparable to the frosting back on the suction line on the low temperature installations. At the cut-out point when the load on the cool-

## Easy Access to Room Cooler



The centrifugal fans are visible (below) in this view of Kelvinator's new room cooler with its exterior cabinet.

it is at this point that the control should be set to cut out, they showed.

Due to the fact that the fan continues to operate when the condensing unit is cut out, the frost is rapidly melted from the surface of the cooling unit, and if the room temperature is still high, the suction pressure rapidly rises to the cut-in point.

In the event that the room temperature is not high, the condensing unit will not cut in again. A setting of 35 lbs. per cu. in. is recommended for the cut-in, and 4 lbs. per sq. in. for the cut-out of the temperature control.

### Installation

The cooler should be located so that its back is about three inches from the wall, and preferably not too close to a corner, Kelvinator engineers showed, in explaining the installation methods of the new model. If the room is not square, the cooler should be set to circulate air in the long direction of the room.

A sulphur dioxide thermostatic expansion valve is to be connected to the lower manifold. The suction line should be connected to the upper manifold. The nuts on both the suction line and liquid line are sealed with hydrolene in order to prevent moisture from entering behind the nut and causing freezing. The bulb of the thermostatic expansion valve should be firmly clamped to the suction line at the point where it is connected to the upper manifold fitting.

A pressure type temperature control is used for starting and stopping the condensing unit. This should normally

have a cut-in of 35 lb. per sq. in. and a cut-out of 4 lb. per sq. in. Since the standard temperature control cannot be adjusted to this high cut-in point, a special control is, therefore, used in room cooler installations.

Due to the fact that it is usually desirable to keep the circulating fan in the cooler operating even when the condensing unit is shut down, the fan should not be connected in series with the condensing unit control, Kelvinator engineers state. A toggle switch is provided at the right hand end of the cabinet for starting and stopping the fans.

The switch and fan motor are connected in series, and placed on a separate circuit in order that the fan operation may be independent of the condensing unit operation.

## Highest Filtrine Efficiency FILTERS & COOLERS

Filtrine Guaranteed Storage Type Coolers  
Factory Approved

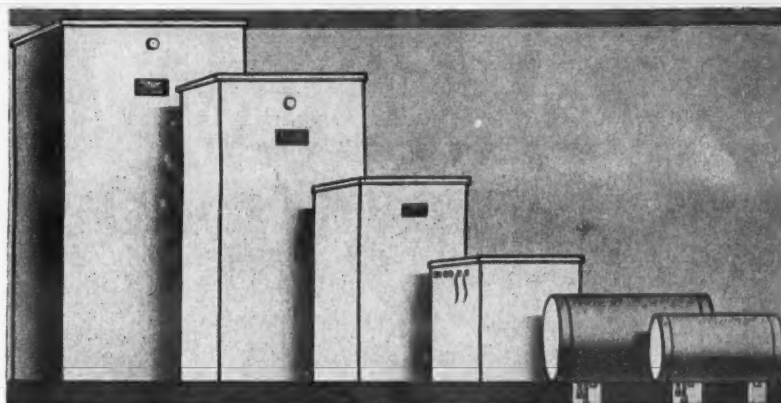
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B-K Junior Copeland Kelvinator Servel

Filtrine offers the new "PRE-COOLER" accessory attachment for any make Bubbler Type Cooler. Reduces temperature of incoming street water 10-15°. Increases Cooler Capacity at small cost.

Filtrine Complete Line of Stock Remote Model Coolers

No. 7 No. 6 No. 5 No. 2 No. 4 No. 3

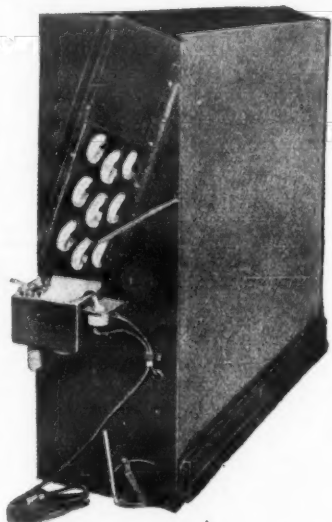


All Remote Models can be furnished "bare" (without insulated container). Larger size storage coolers with one or two individual expansion coils, available to meet specifications.

THE FILTRINE MFG. CO.

53 Lexington Ave.

Brooklyn, N.Y.



Interior Cabinet Showing Controls

er is light, there may be a slight frost formation on the suction line. The control cut-out point, however, should be low enough to permit more than a very slight amount of frost at the cut-out point.

Under ordinary full load operation the condensing unit will operate continuously at a suction pressure in the neighborhood of 5 lb. per sq. in., and there will be no collection of frost on the cooling unit, engineers maintain. As the load on the cooler becomes lighter, however, due to a reduction in the room temperature, the suction pressure will become lower and there may be a tendency to collect frost on the cooling unit. As soon as the frost collection begins to form, there will be a noticeable reduction in the suction pressure, and

## Specialized FORGINGS

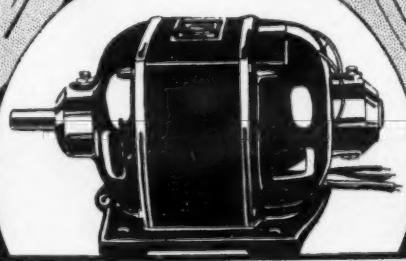
for every Electrical

REFRIGERATION NEED

DETROIT FORGING

Detroit Company Michigan  
Member of Detroit Business Pioneers

## Quiet and Dependable



The special cradle mounting that identifies Leland motors built for refrigeration is part of the explanation of their quietness. The fact that they are built to closer tolerances and more rigid inspection than is usually observed in motor manufacturing, also helps to explain this essential characteristic—quietness in operation. Successfully used in refrigeration—worth investigating.

The Leland Electric Co., Dayton, Ohio, U.S.A.  
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Leland Motors

## BUNDYWELD Tubing...



Bundyweld, double-walled, copper-coated, steel tubing is a new entrant into the electric refrigeration industry.

But it hasn't remained long a stranger. For the foremost executives in the industry have been quick to recognize its merits.

Such qualities as these Bundyweld characteristics compel attention.

For Bundyweld Tubing offers great resistance to vibration; possesses cooling qualities equal to the more costly copper; has uniform wall thickness throughout; offers a clean inside surface free from scale and is quickly and easily fabricated.

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BUNDY TUBING COMPANY  
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The Business Newspaper of the Refrigeration Industry

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### Progress in Room Cooling

RECENT announcements by major manufacturers of electric refrigerators that they are now offering room coolers to the general public, marks a new degree of confidence in the engineers who have been working on the design of air conditioning equipment which will utilize condensing units in sizes such as are used in commercial electric refrigerators.

Belief that there is a profitable market for refrigeration equipment to cool moderate sized rooms during the warm, humid days of summer has induced manufacturers of electric refrigerators to give considerable thought to the subject of room cooling.

Until this year, however, there were only one or two manufacturers who offered to sell a room cooler. Comparatively little was known about the various factors that enter into the design of small, automatic air conditioning systems. Moreover, the cooling unit itself presented new manufacturing problems which threatened to make the cost too high for successful merchandising.

### Problems Being Solved

It appears that the problems of temperature reduction and humidity control in single rooms have been solved to the satisfaction of several manufacturers, and they are now selling standard equipment for this purpose through their distributing organizations.

The impetus given to air conditioning by the advertisements of theaters with large air conditioning systems has prompted an imaginative public to expect comparable systems for homes and offices. The room cooler is the first answer by the electric refrigeration industry. Sales reports from one company in particular, which conducted an aggressive campaign on room coolers this summer, indicates a surprising amount of acceptance among office owners and restaurant keepers.

### Two Types of Design

Room coolers developed by engineers of the electric refrigeration industry fall into two general types of design. One type, built for wall or ceiling mounting, consists of finned coils enclosed in a metal housing, behind which is an electric fan to force air across the cooling coils through deflectors into the room. Moisture extracted from the air condenses on the coils, drips to a catch pan, and is piped away.

The second design utilizes a cabinet to contain the cooling equipment. It is made for floor mounting, and stands about table-height. A motor in the lower portion of the cabinet operates a centrifugal fan which draws in air either by ducts from the outside of the building, or from the room itself for recirculation. The air is passed across cooling coils and distributed into the room through louvred openings in the top of the cabinet.

As in the first type, moisture is condensed on the cooling coils and drips into a drain pan. Humidity is controlled by varying the level of water in the drip pan with a drain adjustment. When lowest humidity is desired, the adjustment is set to pass all condensation to the sewer; if a higher

humidity is required, the control can be regulated so that a certain amount of water is maintained in the pan.

One cabinet type of air conditioner recently placed on the market includes a bank of steam coils alongside the cooling coils, so that in winter the same outfit can be used as a unit heater. In this model, the heating coils pass through the water pan, providing humidification by hastening the evaporation of water from the pan. Thus, this equipment both heats and humidifies the dry air of steam heated rooms.

Standard condensing units are suitable for use with room coolers, usually being placed as remote installations. Water cooled units can be placed in the room being cooled, but air cooled machines must be placed elsewhere because otherwise the heat extracted by the evaporator would be again lost to the air of the room.

### On Our Bookshelves

#### "INGENIOUS MECHANISMS FOR DESIGNERS AND INVENTORS"

Editor: Franklin D. Jones. Publisher: Industrial Press, 140 Lafayette St., New York City. Pages: 536. Price: \$5. Publication Date: 1930.

ILLUSTRATED descriptions of a wide variety of standard and special mechanisms appear in this recent volume for designers who must employ tricky movements.

The mechanisms are the work of 110 experienced engineers and inventors, and were selected by the editor of the book as good examples of well designed movements. Results which one would ordinarily regard as impossible can often be obtained by comparatively simple mechanical arrangements, one discovers by a perusal of this work.

One understands, for instance, that automatic machines which so often invoke the amazement of a factory visitor, are made up chiefly of just the right choice and application of mechanical movements.

The mechanisms are grouped as far as possible, into chapters of general types, facilitating comparison of those which are similar in function and purpose, although not in operation. The book is accompanied by a complete index, which also adds to the ease with which a reader can find the description of a particular mechanism.

The general subjects covered by the book include: cams, intermittent motions (ratchets, gears, cams), tripping, reversing, interlocking, reciprocating parts, speed changing mechanisms, differential and straight-line motions, hydraulic transmissions, automatic feeding, and magazine carriers and slides.

Each movement is clearly described, and the greater proportion of them is illustrated by line drawings. The reader is shown both how a movement operates and what it accomplishes.

### GLEANINGS FROM RECENT PERIODICALS

NOT long ago, as time is counted in human progress, homes were not very well defended from cold. We need not go back to medieval times, although they are not far off, measured by our descent from the cave man, to realize the comfort of the modern dwelling. The few windows of the castles had no glass and glazed paper took its place in the houses of the well-to-do. Heat came from fireplaces and they were the chief device for heating until the arrival of the stove. American ingenuity created central heating, which is little known in sophisticated Europe today. But the problem of keeping warm in winter is pretty well solved and notably so in the United States. We are now, at least in America, beginning to learn how to keep cool.

The American movie theater is a pioneer in this advance in human comfort, and other theaters, hotels, restaurants and even offices in the large cities are using air cooling devices which defy the worse heat waves. The economic factor is the most difficult to deal with. Applied science already has provided efficient means of air cooling, but since intensely and even uncomfortably hot weather lasts but a comparatively short time in the regions where the demand for improvements in living is most general and persistent and where there is enough general prosperity to support it, the problem is so to cheapen the process of air cooling as to justify its general adoption in dwellings. In the recent experimentation of the Pullman company means of cooling passenger cars were found and satisfactorily applied. But the cost was very high. Few home owners can afford to maintain air cooling devices, especially as hot weather does not last long.

Nevertheless, experiment and invention are not balked continually by obstacles, at least where, as with the American people, there is a strong and persistent demand for better living conditions. In due time methods of air cooling in dwellings, in trains and in offices will be brought within our means. This, we are convinced, is going to be one of the improvements of the near future and will be one of the new fields in which money may be invested and labor employed.

It is by invention and the active exploitation of the possibilities of improvements in the common life, in transport, commerce and industry that we shall help in great measure to bring ourselves out of depression. In spite of our financial difficulties, we are working gradually toward a condition in which both the ability and the will to take advantage of new improvements in living and working will reassert itself with increasing force. In spite of many misfortunes and difficulties and dark forebodings depressing our spirit at this moment, our way is forward, not back, and our greatest need is faith in that assurance.—Chicago Tribune.

## Use of Refrigerated Trucks Increases as Body Designs are Improved

By Gale T. Pearce

Engineer in Charge of Sales, Dry-Zero Corp.

THE past year has witnessed a very material increase in the use of insulated and refrigerated truck bodies. Taking their cue from some of the smaller packers, who delivered their meats in refrigerator bodies and, therefore, at considerably lower temperatures, and in better condition than could be secured with open type, or uninsulated bodies, the larger packages have expanded their

insulated and refrigerated equipment very materially; in fact, one of them has placed into operation approximately 500 additional trucks during the year.

Many of these trucks have gone into territories where, up to the present time, meat supplies were being delivered to the retailer in uninsulated equipment. The packers' salesmen will, of course, take advantage of the fact that the meats from insulated and refrigerated bodies will be more desirable from the standpoint of appearance, and will require less refrigerating effect to bring them back to a proper temperature in the butchers' cooling equipment.

This will probably have the effect of causing other packers, who previously had been using ordinary panel bodies, or open trucks, for deliveries, to install insulated and refrigerated trucks in order to keep a proper portion of the business.

#### Used By Transport Companies

Refrigerated bodies are being put into service by a large number of truck transport companies for maintaining proper temperatures for perishables during the period of transport. These bodies haul loads ranging from frozen products, which require temperatures of below the freezing point, up to equipment for handling candies and eggs where it is only desired to keep the temperature below 60° F.

Several transport lines have installed trucks, properly insulated to carry solid carbon dioxide, which has a temperature of 109° to 114° below zero Fahrenheit, and requires very efficient insulation to prevent excessive evaporation during transit.

A recent innovation in this field is a fleet of bodies for transporting ready-mixed biscuit and pie dough. In this instance it is essential to maintain low temperatures to prevent the product from moulding or the packages becoming greasy and unsalable on account of the high temperature during the warm summer months.

As the mechanically refrigerated ice cream cabinets become more generally distributed throughout the country, more refrigerated ice cream bodies are placed into service. At the present time these bodies are refrigerated by means of salt and ice, solid carbon dioxide, frozen brine cartridge and mechanical units.

#### All Types for Ice Cream

No one type of refrigeration seems to hold a particularly dominant position in this field. The frozen brine cartridge type provides extremely low cost operation and also permits the furnishing of refrigeration for the retailers' cabinets in a very desirable form.

The mechanical refrigeration bodies are most desirable where the manufacturer has a limited amount of refrigeration capacity, and is able to use the truck bodies as auxiliary hardening rooms for his ice cream.

The solid carbon dioxide refrigeration is especially adaptable in the ice cream field where the manufacturer can load his ice cream into the bodies at well below zero temperatures. Some of the other fields in which the insulated and refrigerated body has forged ahead are for the transportation of cheese, milk, butter, oleomargarine—in fact, there has been expansion in almost every field of perishable food products.

#### Cites Weight Factor in Bodies

The builders of insulated bodies today are offering equipment much more suitable for the economical handling of refrigerated loads than were heretofore available. The lightest possible weight, coupled with high insulation efficiencies, are stressed in all insulated or refrigerated body specifications.

Not so long ago all that was required of a refrigerated body was that it would maintain the temperature for which it was built. Today the purchaser wants to know definitely how much the body will weigh, as well as what the refrigeration costs will be to maintain the desired temperatures.

As the total load on the chassis of the truck is limited either by the capacity of the truck, or state laws specifying a maximum gross weight, every reduction in body weight permits a corresponding increase in pay-load which may be carried.

To secure the maximum pay-load, aluminum framing and panels are substituted for steel and wood, weight insulation has become desirable, as with light weight efficient insulation four and five-inch walls may be used without any material increase in body weight. Greater economy in refrigeration costs is secured, as smaller quantities of ice or other refrigerant need be carried and consumed.

We often hear of the economic thickness of insulation for a given inside temperature or condition of service. These wall efficiencies can only be given in a general way, as variations in the operating methods of the user will necessitate changes in the specifications for the truck body insulation.

For example, a mechanically refrigerated body could operate at a low cost for refrigeration with a relatively thin insulation wall, providing the truck is in continuous service. If, however, the truck breaks down at some distance from the users plant, a highly efficient insulation of the truck body will conserve the refrigeration of the load for a long period of time.

In addition, the greater efficiency in body insulation permits the use of a smaller mechanical unit, thus making a saving both in first cost of the unit, and in subsequent operating costs for the body.

With bodies destined to be refrigerated with solid carbon dioxide, the higher efficiencies in wall structure permit economical operation with a relatively high cost refrigerant, as doubling the insulation efficiencies will practically halve the quantity of solid carbon dioxide required to maintain satisfactory temperatures.

#### Preparing for Quick-Frozen Foods

Some purchasers of bodies are looking into the future, and purchasing equipment well enough insulated to handle economically the quick-frozen meats, fruits and vegetables which will require zero and sub-zero temperatures, to insure the products reaching the consumer in proper condition.

With the exception of the ice cream industry, only a few bodies have been placed in service which will hold economically the low temperatures required for frozen meats and fruits. These bodies will be readily secured when they are desired, as the present development of the ice cream delivery body is such as to take care of frozen food requirements with very few changes.

In this competitive era, every increase in the number of refrigerated bodies in service means additional points in the country where a new standard of service is established, and suppliers of foods will be induced to install similar equipment in order to hold their present customers.

We may expect during the coming year an even greater increase in the refrigerated truck body business than was experienced during the past.

## WESTERN FIRM BUILDING TRUCKS FOR BORDEN

(Concluded from Page 1, Column 2)

motor is thermostatically controlled from the refrigerated compartments.

Inside the driver's compartment is installed an indicator which shows the truck temperature, and a clutch which permits the driver to disengage or engage the compressor driving mechanism. Thus, on a long haul with few stops, continual operation of the refrigeration equipment may be unnecessary, and the driver can disconnect it until the temperature indicator advises him to start it again.

Methyl chloride is the refrigerant used, in a direct expansion cooling system consisting of pipe coils on the walls and ceiling of the food compartment. Metal screens protect the coils on all sides of the truck.

#### Bodies of Met-L-Wood, Balsa Wood

Bodies used by this company are fabricated with Met-L-Wood or Haskelite panels and Balsa Wood insulation. The panels are built in various thicknesses, depending on the temperatures to be held, with a metal face and a core of insulation. To hold zero or sub-zero temperatures, a panel 6½ in. thick (over all) is employed; a 4 in. panel is installed in trucks whose temperatures range from 32° to 40° F.

The ice cream bodies are constructed with a compartment for empty cans in the rear. When a buyer wishes, a chamber carrying 1,200 lbs. of water ice is located opposite the compressor compartment. This ice is not for refrigeration of the truck, but for fountain use by the customer's of the ice cream company.

The complete refrigerating equipment, including the power take-off, cooling coils, and condensing unit, weighs approximately 600 lbs., while the body itself with can rack, ice compartment, and refrigerating plant, but exclusive of the chassis and motor, weighs about 3,850 lbs., according to officials of the firm.



## SERVICE HINTS

By FRANK W. GRAY

REFRIGERATION installation and service frequently calls for extreme resourcefulness. An illustration of this is found in the experience of a service man from the Refrigeration Maintenance Corp. of San Francisco, who recently received a hurry call from Reno, Nevada, to install a job. The owner of the equipment explained briefly over the long distance phone that an ammonia system was to be installed, and that all the equipment was on hand.

Upon arriving in Reno, the service man found that the job was to be installed in a restaurant near the new fair grounds, and that there must be no delay in getting the equipment into operation since the racing season was beginning only two days hence. In a field near the race track was a crate containing a 1 hp. ammonia compressor, and a pile of 1 1/2 in. ammonia coils and fittings.

In the kitchen of the newly opened restaurant were two refrigerators, one 15 ft. long, by 3 ft. deep, by 9 ft. high, and a smaller box 10 ft. long, by 8 ft. wide, by 3 ft. deep. The service man set the machine in the back room, hooked up the electrical connections, and water supply and waste pipes to the water-cooled condenser, and then began to fit the coils into the boxes.

Here he encountered his first difficulty—there were enough coils on hand for the larger box, but not for the smaller one. And no pipe of the required size was to be found in Reno, nor could any be procured for several days. To add to his difficulties, he found that the expansion valve and other fittings were of the wrong size.

His troubles seemed to multiply under the torrid Nevada sun, not helped by the expostulations of the proprietor who insisted that he must have refrigeration without delay, whether it be produced by ammonia or tear gas.

Investigation disclosed that copper tubing, brass fittings, and expansion valves for methyl chloride systems were available in Reno. So, lacking the proper material to complete the ammonia system, he boldly decided to convert the system to methyl chloride.

He made up a coil for the smaller box, using 1/2 in. copper tubing soldered to galvanized iron fins, designing the coil for 100% vertical surface area. The larger ammonia coils in the other refrigerator were not changed, a methyl chloride expansion valve being connected to this system, and an automatic methyl chloride expansion valve was connected to the specially constructed coil in the small box.

The charge of ammonia was then pumped out of the machine, the oil withdrawn, and the machine recharged with methyl chloride and new oil.

The reason the service man did not use an automatic expansion valve on the larger box was he feared that being unable to control the back pressure on this valve, the majority of the flow of refrigerant would go into the larger coils.

When he put the system into operation this indeed proved to be the case, the larger ammonia coils slowly frosting up while the coils in the smaller box remained warm.

But by altering the back pressure adjustment on the expansion valve serving the larger box he was finally able to force the refrigerant over into the smaller box, thus balancing up the system.

When the restaurant opened to accommodate hundreds of patrons on the first day of the races, the refrigeration system was working to perfection.

It might be added that 100% efficiency could not be expected of such heterogeneous hook-up—the ammonia compressor actually producing about two-thirds the efficiency that could have been expected with a machine of the same capacity designed for methyl chloride. The job is, however, very interesting from a standpoint of service ingenuity.

An interesting adaptation of refrigeration equipment to the cooling of display counters for candy was recently developed by two service men in the west. A 1/2 hp. sulphur dioxide compressor was mounted upon an insulated

cabinet in which was installed a multiple fin coil with maximum surface area.

A small electric fan was also installed in the insulated cabinet, connected to switch off and on with the cycles of the machine. Insulated sheet iron pipes, 6 in. in diameter, were then used to transmit the cooled air into one end of the counter, and to suck the warm air from the other end.

An air thermostat was used in the counter to control the temperature, maintaining a temperature of about 60° F., suitable for the keeping of candies

### Posing for a 'Film' Test



Bits of sediment in the whirling oil of this refrigerating unit are easily seen through the three-quarters of an inch of plate glass in a life test at the Westinghouse Research Laboratories in East Pittsburgh, Pa.

A small electric light bulb is inside the housing to show up small particles, as well as the precipitation of gummy materials on metallic parts.

These tests are performed to find the oil which will give the longest life.

during warm months of the year. This installation is actually being used in a great many cases, and has many good features.

It is easily and quickly installed without the expense and labor of hanging coils, and the constant circulation of cool air keeps the candy in good condition, while the required humidity is easily maintained.

Many low temperature display counters are now being installed with brine sleeves built into the walls, thus eliminating the space required for the installation of overhead coils. This method of construction seems to work out well for low temperature requirements.

The writer recently saw a development of this method of cooling in a specially built counter for the storage and display of frozen fish.

The slanting top of the cabinet was fitted with triple glass plates for display, while the lower part of the cabinet was fitted with metal drawers with woven wire racks for the keeping of various types of fish. The freezing coils were submerged in brine within the metal lining of the cabinet, similar to the design of an ice cream cabinet.

No difficulty was experienced in obtaining very low temperatures with this type of installation, while the area of the cooling surface was such as to maintain a fair humidity content in the air.

A reader of the News writes to inquire whether he would have to change the syphon seal of a sulphur dioxide compressor in converting it to the use of methyl chloride. The writer can see no practical reason for making such a change, nor for changing any other part of the compressor assembly. It has been consistently rumored that methyl chloride is much harder to retain in a sys-

tem than sulphur dioxide. As a matter of fact, methyl chloride is no harder to hold in a system than any other refrigerant, if proper installation methods are used.

Another reader of the News writes to inquire how he can build a cross fin coil for a special job where manufactured coils will not fit. He asks how to estimate the proper vertical surface area of cooling coil required for a box with 200 sq. ft. of outside surface area, and whether both sides of the fin should be used in making calculations of cooling unit area.

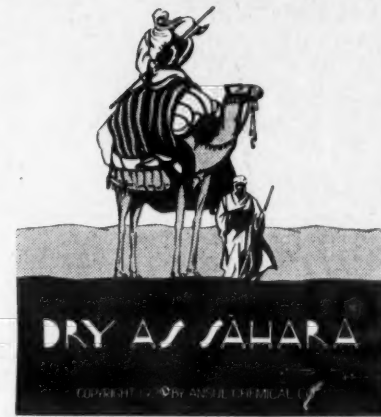
Cross fin coils are somewhat difficult for the amateur manufacturer to make. The tubing must be expanded through the cross plates in such a way as to make a positive contact, and to make the assembly of the coil rigid. In making up a special coil of this type, the fins may be run lengthwise of the box with almost equal efficiency, provided that space is available above and below the coil in the ice bunker for the air to circulate.

By running the fins lengthwise, each metal plate may easily be soldered to a loop of expansion tubing, the tubes being manifolded on each end, and brackets soldered on each end to make the construction rigid.

Of course, the dimensions of the coil must permit its being installed through the ice bunker door, in some cases two separate coils being more practicable than one.

Both sides of the fins should be computed in calculating surface area, and the closer the cooling unit area can be made to equal that of the outside area of the box, the easier it will be to set the system on an automatically defrosting cycle.

## ANSUL Sulphur Dioxide

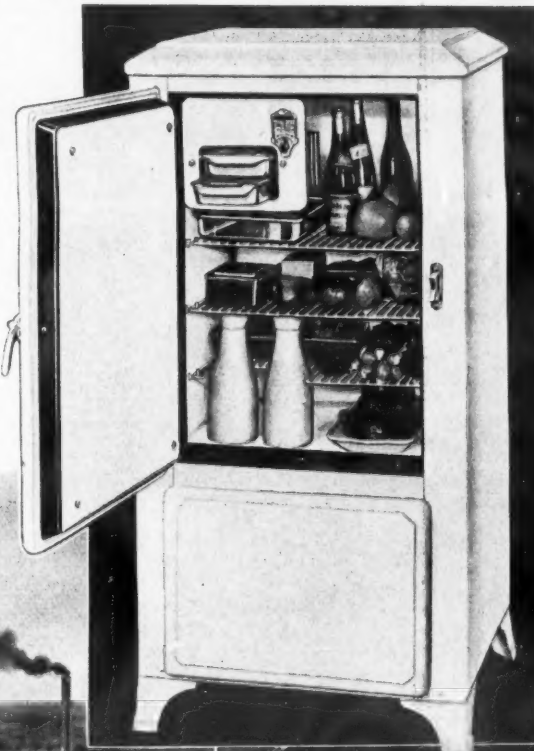


ANHYDROUS SULPHUR DIOXIDE

ANSUL CHEMICAL COMPANY  
MARINETTE - WISCONSIN

## LEONARD Electrics Are Protected by BONDERITE

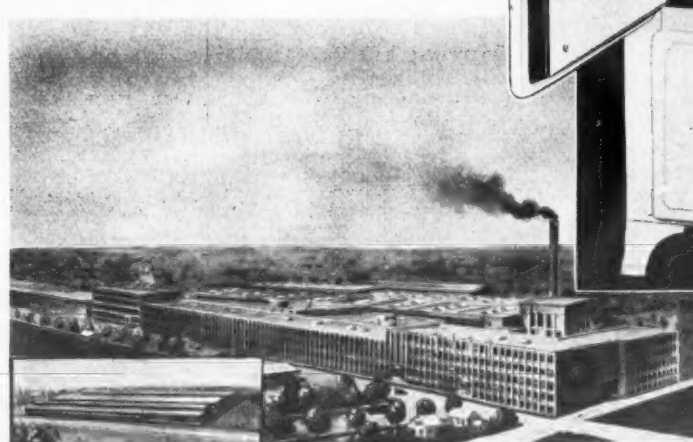
Cabinet lacquer "on to stay" giving rust-protection, longer life and permanent beauty.



Leonard Electric Model L-5 recently introduced.

A view of the Bonderizing installation.

Below: The Leonard Cabinet plant at Grand Rapids, Michigan.



WHEN the Leonard Refrigerator Company, for fifty years maker of cabinets, introduced the Leonard Electric, their advertising proclaimed—"Combining every valued betterment in home refrigeration" . . . "A cabinet of beauty" . . . "Long service will justify your desire to own one!"

Among the outstanding refinements warranting such description of the Leonard Electric is Bonderizing.

Bonderizing preserves the beauty and enhances the usefulness of this refrigerator by assuring the permanence of its lacquer cabinet finish.

Before lacquer is applied to Leonard cabinets, they are given a ten-minute immersion in a tank of Bonderite solution. The metal surfaces are transformed to an insoluble rust-proofing phosphate, chemically clean

and microscopically etched. The lacquer is slightly absorbed upon application and firmly anchored upon drying.

There can be no separation of metal and lacquer. Temperature and humidity extremes have no effect. Destructive rust is completely defeated. If accidental abrasions occur, only the exposed metal is subject to corrosion. There can be no "under-eating" to surrounding areas.

Like Leonard, many leaders in refrigeration and other industries have adopted Bonderizing because it represents a simple, economical method of adding long life, beauty, and sales appeal to the product with paint finished surfaces. It is widely used in the automo-

tive, building hardware, metal furniture, electrical, and office equipment fields.

Bonderizing is adaptable to any output schedule—mass or small. Installation and operation entail little expense and no skilled labor. The highly concentrated Bonderite powder, shipped in one-time barrels, is mixed with boiling water to form the Bonderite solution. It is safe and easy to handle.

We are glad to give detailed information regarding application of the process to any manufacturer's specific requirements.

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## ORDER RESTRAINS USE OF 'MAJESTIC' TRADE NAME

NEWARK, N. J.—Majestic Radio Tube Corp., Harrison, N. J., was temporarily restrained from using the word "Majestic" on the products or the corporate name of the firm.

Federal Judge Guy L. Fake granted the injunction on the petition of the Grigsby-Grunow Co., Chicago, who charged the Harrison firm was "trying to capitalize on \$6,000,000 spent in advertising."

A hearing was scheduled for November.

## REFRIGERATION GASES

CARBON DIOXIDE  
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## Announcing . . . A NEW 5-TRAY AMERICAN CASTINCOIL DOMESTIC UNIT



A New 5-Tray American Castincoil Domestic Unit with American Automatic Expansion Valve

To meet the increasing demand of leading refrigerator dealers for an American Castincoil Domestic Unit with greater cube capacity, this new 5-tray size is now available for boxes of 7 to 9 cubic feet, producing 140 ice cubes.

A feature of this new unit is a removable shelf which permits the insertion of a deep tray or the storage of ice cream or other frozen foods.

Like all American Castincoils, this unit is made of aluminum cast around copper coil and durability. It is designed for individual units in connection with American Automatic Expansion valves . . . for Multiple Systems with American Thermostatic Expansion valves. It can be easily installed in old or new boxes. Each tray has capacity of 28 cubes; trays are furnished either with aluminum grids or Flexo-trays. American Castincoil Domestic Units now are made in three sizes: 2-tray for boxes of 4, 5 and 5½ cubic feet; 3-tray and 5-tray for those of 7 to 9 cubic feet, according to cube requirements. Write today for complete information.

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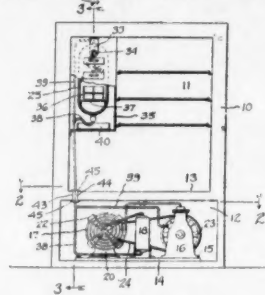
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## LATEST PATENTS ISSUED

### ISSUED AUGUST 4

1,816,863. REFRIGERATOR CONSTRUCTION. Glenn Muffly, Detroit, Mich., assignor to Copeland Products, Inc., a Corporation of Michigan. Filed June 3, 1927. Serial No. 196,164. 4 Claims. (Cl. 62-116.)



1,316,863

1. In a refrigerator, a pair of chambers provided with an insulating wall therebetween, a compressor element and a receiver element in one of said chambers, a cooling element in the other of said chambers, a notch in an exposed edge of said wall, an unbroken pipe connecting said receiver element to said cooling element, an unbroken pipe connecting said cooling element to said compressor element, said pipes passing through said notch, and a removable filler block received within said notch closely embracing said pipes.

1,816,955. REFRIGERATOR CONSTRUCTION. Lee S. Chadwick, Shaker Heights Village, and Marc Resek, Cleveland Heights, Ohio, assignors to Perfection Stove Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 7, 1929. Serial No. 344,954. 7 Claims. (Cl. 62-118.)

1. In refrigeration apparatus of the class set forth, the combination of a cabinet incorporating an open frame of non-heat conducting material, a wall section for application thereto consisting of a body of insulating material having a portion that occupies said frame and a marginal portion that overlies and engages the frame, metal plates applied to the inner and outer surfaces of said body of insulating material, said body and said plates having registering openings, spools of non-heat conducting material extending through the openings in the outer plate and said body of insulating material and having heads overlying the portions of the outer plate adjacent said openings, an evaporator disposed within the cabinet, and fastening means connecting it to said spools.

1,816,956. CONDENSER. Lee S. Chadwick, Shaker Heights, Ohio, assignor to Perfection Stove Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 27, 1929. Serial No. 358,468. 25 Claims. (Cl. 257-28.)

1. A condenser for use in refrigeration apparatus of the class set forth, the same comprising a condensing chamber, means for maintaining a substantially stationary body of cooling fluid in contact with a part of the wall of said chamber, and means for circulating a cooling fluid in contact with another part of the wall of said chamber.

1,816,975. REFRIGERATION APPARATUS. David F. Keith, Cleveland, Ohio, assignor to Perfection Stove Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 27, 1927. Serial No. 242,574. 18 Claims. (Cl. 82-120.5.)

1. In refrigeration apparatus of the intermittent absorption type consisting of a closed system involving a generator-absorber section, and evaporator section and vapor conveying means through which said sections communicate; and a siphon independent of said means having its short leg opening into the evaporator section and its long leg opening into the generator-absorber section, the siphon being otherwise closed throughout its length to the interior of the system.

1,816,984. COOLER. Harry L. Miller, Chester, Pa. Filed Mar. 7, 1930. Serial No. 434,022. 5 Claims. (Cl. 257-183.)

1. In a trickle cooler, the combination with a vertical series of horizontally disposed cooling tubes connected at their ends by returns provided with outwardly extending lugs, of vertical supporting racks or bars having inwardly extending lugs on which said outwardly extending lugs rest, said outwardly and inwardly extending lugs being constructed with registering holes, bolts passing loosely through said lugs in said holes and serving to attach said returns to said supporting racks or bars, and means outside of said racks or bars, for supporting them.

1,817,086. SOUND DEADENING AND HEAT INSULATING MATERIAL AND METHOD OF MAKING THE SAME.

Harvey B. Lindsay, Evanston, and Arthur L. Clements, Chicago, Ill., assignors to Dry-Zero Corporation, Wilmington, Del., a Corporation of Delaware. Filed Mar. 11, 1929. Serial No. 346,003. 4 Claims. (Cl. 154-28.)

3. That step in the method of forming a sound deadening and insulating material, which consists in immersing a bat containing cellob fibers in a bath of sizing between outer coverings of impregnable material and forcing air out of said bat and subsequently allowing said bat to expand while immersed to enable said fibers to take on said sizing adjacent said coverings whereby said bat receives an adhesive coating for securing said coverings to it.

1,817,202. EXPANSION CHAMBER FOR REFRIGERATING MECHANISMS. Glenn Muffly, Detroit, Mich., assignor to Copeland Products, Inc., a Corporation of Michigan. Filed July 18, 1927. Serial No. 206,438. 4 Claims. (Cl. 62-126.)

8. An expansion chamber for refrigerating systems comprising a pair of metal sheets joined together throughout their edges and being generally spaced between their edges, said joined sheets being bent to bring two opposed edges thereof into contact with each other whereby to form a tubular structure, and an inlet and an outlet for the space between said sheets.

1,817,232. APPARATUS FOR TEMPERATURE REGULATION. Henry F. Buhrig, Chicago, Ill., assignor, by mesne assignments, to Standard Brands, Incorporated, Dover, Del., a Corporation of Delaware. Filed Jan. 22, 1926. Serial No. 83,071. 5 Claims. (Cl. 257-189.)

1. In apparatus adapted for carrying out chemical or biological processes at a controlled temperature, comprising a receptacle having a wall of material which possesses good heat conducting properties, the exterior of said wall being divided into a plurality of cooling zones, each provided with means for supply and uniform distribution of cooling liquid against the outer surface of the zone to which it is supplied and provided also with means for independently regulating the supply of cooling liquid to each zone and with means for removing the supplied liquid from each zone at approximately that location where the said liquid has approximately spent its cooling effect and has attained a temperature very nearly equal to that of the contents of the receptacle adjacent the zone.

1,817,263. ICE CAN. Louis S. Morse, York, Pa., assignor to York Ice Machinery Corporation, York, Pa., a Corporation of Delaware. Filed June 25, 1930. Serial No. 463,700. 5 Claims. (Cl. 62-157.)

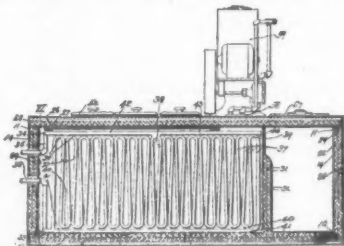
1,817,277. ARRANGEMENT FOR COOLING AND HEATING BEDS. Albert Uhlig, Rorschach, Switzerland. Filed Apr. 3, 1930. Serial No. 441,382, and in Switzerland June 4, 1929. 4 Claims. (Cl. 219-39.)

1. An arrangement for heating or cooling beds, comprising in combination a blower, a heating pipe connected with said blower, a cooling pipe connected with said blower, a common pipe to which said heating pipe and said cooling pipe are connected, electric heating bodies in said heating pipe, a refrigerator interposed in said cooling pipe, branch pipes one for each bed branching from said common pipe, a distributing pipe at the end of each branch pipe situated in the foot end of each bed, and means for selectively connecting with said blower said heating pipe or said cooling pipe.

1,817,339. MOLD. Marie B. Barnes, Los Angeles, Calif. Filed June 25, 1928. Serial No. 288,117. 2 Claims. (Cl. 62-108.5.)

1. As a new article of manufacture, a plate provided with skirting along its marginal edge, a plurality of mold portions in said plate, said mold portions simulating animal life, and a cover adapted to enclose said mold portions.

1,817,498. ICE CREAM MAKING UNIT.



1,817,493

William G. Smith, Memphis, Tenn. Filed

## PROFESSIONAL SERVICE

**PATENTS**  
Searches, Reports, Opinions by a Specialist in REFRIGERATION  
**H. R. VAN DEVENTER**  
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**Electrical Testing Laboratories**  
80th St. & East End Ave.  
NEW YORK

Feb. 27, 1928. Serial No. 257,236. 3 Claims. (Cl. 62-126.)

2. An expansion coil for refrigeration purposes, comprising a continuous coil having vertically disposed legs, a feeder header connected to the first and last of said legs and a discharge header connected to the center pair of said legs.

1,817,544. SHARP FREEZING CONTAINER. Lloyd G. Copeman, Flint, Mich., assignor to Copeman Laboratories Company, Flint, Mich., a Corporation of Michigan. Filed Aug. 20, 1928. Serial No. 300,713. 3 Claims. (Cl. 62-108.5.)

1. A sharp freezing container of a type adapted to be positioned in heat-conducting relation with the lowside of a mechanical refrigerating system, comprising a container formed of metal, and a removable unitary grid structure formed of non-metallic flexible material and adapted to be positioned within said metallic container.

1,817,545. SHARP FREEZING CONTAINER. Lloyd G. Copeman, Flint, Mich., assignor to Copeman Laboratories Company, Flint, Mich., a Corporation of Michigan. Filed Feb. 1, 1929. Serial No. 336,889. 8 Claims. (Cl. 62-108.5.)

6. A tray for refrigerating apparatus having integrally formed partitions for dividing the tray into compartments, the greater portion of said walls being formed of a non-metallic flexible material and one of the walls of each compartment being fabricated to effect a relatively greater conductivity than the other walls.

1,817,605. REFRIGERATING APPARATUS. Joseph S. Belt, Amarillo, and Edward M. Ladd, Fort Worth, Tex. Filed May 14, 1929. Serial No. 362,980. 2 Claims. (Cl. 62-91.5.)

1. In a refrigerator, a refrigerating unit comprising an open-top heat-insulating container adapted to receive a block of refrigerant in the form of solid carbon dioxide, openings in a plurality of sides of the container near the bottom thereof adjustable closure plates for said openings to regulate the escape of gases liberated by the refrigerant and the admission of air respectively from and into the container so as to control the refrigeration, and an ice pan slidably fitted within the container and adapted to rest upon the top of the refrigerant, said pan being further adapted to lower by gravity and remain in contact with the refrigerant as the latter gradually diminishes.

1,817,656. STORING AND DISPENSING APPARATUS. Theodore L. Valerius, Fort Atkinson, Wis., assignor to Valerius Corporation, Jefferson, Wis., a Corporation of Wisconsin. Filed Apr. 24, 1928. Serial No. 272,530. 3 Claims. (Cl. 62-101.)

1. In apparatus of the class described, the combination of a casing having a plurality of compartments, certain of said compartments containing a temperature changing medium, means in one of the last mentioned compartments for maintaining the medium at a desired temperature, a thermo-siphonic system connecting said medium containing compartments, and means connected with said thermo-siphonic system for refrigerating another of said compartments, the last said means comprising a closed drum in said compartment connected at one side to said system by a pipe serving as the inlet and outlet for said drum.

1,817,715. CAN GRID. Norman M. Small and Leon Buehler, Jr., Waynesboro, Pa., assignors to Frick Company, Waynesboro, Pa., a Corporation of Pennsylvania. Original application filed Oct. 6, 1925. Serial No. 60,896. Divided and this application filed Sept. 6, 1928. Serial No. 304,278. 8 Claims. (Cl. 62-159.)

1,817,853. VALVED PISTON. Norman M. Small, Waynesboro, Pa., assignor to Frick Company, Waynesboro, Pa., a Corporation of Pennsylvania. Filed Sept. 22, 1930. Serial No. 483,691. 6 Claims. (Cl. 230-22.)

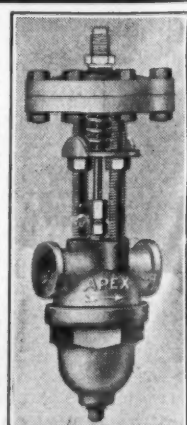
1. A valved piston comprising a piston head, a valve seat attached thereto and having axial fluid inlet ports and extended for an appreciable portion of its length within said crank case, a boss carried at an appropriate point in the length of the tubular member without the crank case, a reducer fitting carried by the boss, an adaptor sleeve telescopically associated with the tubular member and adjustably connected with the adjacent end of the reducer fitting, jam nuts arranged at intervals upon the adaptor sleeve having contacting engagement with opposite sides of the crank case wall circumferentially of the opening therein, and said tubular member being substantially enlarged from a point across the opening in the wall of the crank case and inwardly therefrom.

1,817,890. REFRIGERATING APPARATUS AND METHOD OF REFRIGERATING FOOD PRODUCTS. Clarence Birdseye, Gloucester, Mass., assignor, by mesne assignments, to Frigstated Foods Company, Dover, Del., a Corporation of Delaware. Filed July 1, 1929. Serial No. 304,278. 8 Claims. (Cl. 62-159.)

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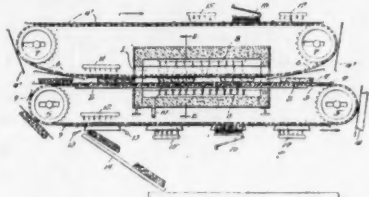




# IN REFRIGERATION FIELD

(Concluded from Page 6, Column 5)

1,817,890. 15 Claims. (Cl. 62-104.)  
1. A refrigerating apparatus having means for maintaining a spray of liquid cooling medium, together with means for conveying matter in containers within the range of the spray, said means providing a shield



1,817,890

beneath said containers and a shield above said containers, both of said shields being of greater size than said containers for preventing access of the spray directly to said containers.

ISSUED AUGUST 11

1,817,948. HEAT EXCHANGE DEVICE. Milton S. Smith, Maplewood, N. J., assignor to Carrier Construction Company, Inc., Newark, N. J. Filed Nov. 16, 1929. Serial No. 407,758. 16 Claims. (Cl. 257-149.)

1,818,008. MANUFACTURING PROCESS. Carl Clifford Ritter and Harry M. Williams, Dayton, Ohio, assignors to Frigidaire Corporation, Dayton, Ohio, a Corporation of Delaware. Filed Nov. 27, 1929. Serial No. 410,267. 9 Claims. (Cl. 91-70.1.)

1. The process of tinning the inner surface of a copper tube which comprises slushing the said surface with a flux containing finely divided tin suspended therein, removing the excess of flux, heating the so treated tube to a temperature sufficient to melt the finely divided tin, slowly rotating the tubing during the heating operation and removing the excess flux from the tubing substantially in the manner described.

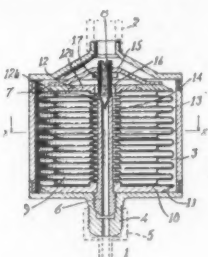
1,818,015. COOLING UNIT FOR REFRIGERATING SYSTEMS. Edwin H. Steedman, St. Louis, Mo. Filed Feb. 6, 1928. Serial No. 252,299. 2 Claims. (Cl. 62-126.)

1. A cooling unit for refrigerating systems, composed of two shells arranged one within the other in spaced relation and provided with co-acting portions which form hollow side walls that contain a refrigerating medium and which surround a center space in which articles or materials may be placed, the hollow wall at the top of said space serving as a float chamber, the hollow wall at the bottom of said space serving as a cold plate for abstracting heat rapidly from a flat bottom receptacle positioned in said space, and the hollow walls at the side of said space serving as circulating passageways which connect the cold plate with the float chamber.

1,818,034. CIRCULATORY SYSTEM FOR REFRIGERATED COUNTERS. Jayson K. Bond, Milwaukee, Wis. Filed Feb. 28, 1929. Serial No. 343,356. 4 Claims. (Cl. 62-89.5.)

1. In a refrigerated display counter, an angular duct therewithin and opening into the interior of the counter at its lower forward portion, a cooling medium within a portion of said duct, a pair of separated flues entering said duct remote from its open end portion and extending upwardly within said counter, and a trough connecting the upper portions of said flues.

1,818,061. AUTOMATIC EXPANSION VALVE FOR ARTIFICIAL REFRIGERATING SYSTEMS. Clarence M. Holley, Detroit, Mich., assignor, by mesne assignments, to The Hoover Company, North Canton, Ohio, a Corporation of Ohio. Filed Aug. 26, 1918. Serial No. 251,583. Renewed Aug. 29, 1924. 10 Claims. (Cl. 50-21.)



1,818,061

2. In a refrigerating apparatus of the described character, the combination of a valve chamber having communication with the refrigerant circulatory system, a valve controlling such communication, and a gas filled hermetically sealed collapsible chamber arranged within the valve chamber and operatively and rigidly connected with the valve and adapted to actuate same.

1,818,117. WORKING SUBSTANCE FOR PRODUCING HEAT TRANSFORMING EFFECTS. Ransom W. Davenport, Detroit, Mich., assignor to Chicago Pneumatic Tool Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 23, 1927. Serial No. 170,427. 4 Claims. (Cl. 252-5.)

1. A non-flammable volatile liquid having a boiling point below 65° C. comprising an inflammable halogenated hydrocarbon together with a sufficient quantity of a related halogenated hydrocarbon of higher halogen content to render the composition non-flammable.

1,818,129. REFRIGERATING CABINET. William F. Grupe, Rutherford, N. J., assignor to Armstrong Cork Company, Lancaster, Pa., a Corporation of Pennsylvania. Filed June 13, 1927. Serial No. 198,673. 2 Claims. (Cl. 217-17.)

1. A refrigerating cabinet including walls of cork, each wall being molded substantially to finished contour and having crust-like exterior surfaces materially denser than its interior to provide a nonporous air sealing surface while preserving a relatively less dense interior having relatively higher insulating properties than the denser exterior, supports interior of the cabinet attached and supported by the relatively denser portions of said walls, and a frame supporting said walls, the frame being disposed wholly exteriorly of the cabinet whereby the supports are enclosed in and supported by the cork insulation independently of the framework supporting the walls.

1,818,133. REFRIGERATING SYSTEM. George Hilger, Chicago, Ill. Filed Apr. 13, 1927. Serial No. 183,249. 6 Claims. (Cl. 62-104.)

2. A refrigerating system having, in combination with a room to be cooled, an enclosed spray refrigerating unit mounted in the upper portion of said room, said unit having an inlet through which warm air is drawn to be cooled and an outlet through which cooled air is discharged, and a baffle member for directing air currents along said spray unit, said baffle member underlying and embracing the sides of said unit and having that portion thereof underlying said outlet opening removed to facilitate the flow of cold air from said baffle member.

1,818,139. REFRIGERATING APPARATUS. Jesse G. King, Dayton, Ohio, assignor by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Dec. 31, 1927. Serial No. 243,989. 14 Claims. (Cl. 62-126.)

13. Refrigerating apparatus comprising in combination a cabinet and a plurality of refrigerating elements disposed side by side in the cabinet; each of said elements including a freezing compartment and each including a plurality of ducts for circulating refrigerant, certain ducts of one of said elements being in contact with a compartment of another of said elements.

1,818,166. REFRIGERATING MACHINE. Jacques Schneider, Antwerp, Belgium. Filed Feb. 21, 1930. Serial No. 430,355, and in Belgium Apr. 4, 1929. 2 Claims. (Cl. 62-115.)

1. In a refrigerating device of the compressor type, a cold economizer comprising: a cylindrical casing inserted in the suction pipe of the compressor, a coil arranged inside the casing, one end of the coil being connected with the delivery pipe of the condenser and the other end being connected with the regulating valve of the machine, an inlet and an outlet for the cold vapours flowing from the evaporator to the compressor, the arrangement being such that the heat exchange between the cold vapours flowing around and the insufficiently condensed vapours flowing inside said coil liquefies the latter, and a tank placed inside the casing in such a way that the cold vapours pass through part of it on their way to the space surrounding the coil and allow the drops of liquid which they still retain to fall on the bottom of the tank, whereby the liquid mass accumulating on said bottom will evaporate when the refrigerating device is restarted and thus prevent superheating of the compressor.

1,818,181. REFRIGERATION APPARATUS.

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Henry E. Willsie, New York, N. Y., assignor to The Union Trust Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 13, 1926. Serial No. 141,414. 9 Claims. (Cl. 62-120.5.)

1. In the combination of a still-absorber, evaporator and condenser connected together, a drain pipe connecting to the bottom of the evaporator adapted to drain liquid from the evaporator toward the still-absorber, a check valve in said drain pipe, and automatic means for opening said check valve during the heating of the still-absorber.

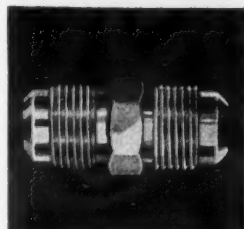
1,818,325. ICE VENDING MACHINE. Albert Happel, Toledo, Ohio, assignor, by mesne assignments, to Gifford-Wood Company, Hudson, N. Y., a Corporation of New York. Filed Dec. 15, 1924. Serial No. 756,132. 24 Claims. (Cl. 125-23.)

1,818,348. REFRIGERATING APPARATUS. Ira L. Nickerson, Sound Beach, Conn., assignor to Chicago Pneumatic Tool Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 30, 1926. Serial No. 138,595. 6 Claims. (Cl. 62-116.)

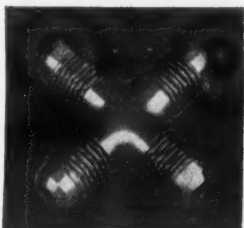
2. The combination with a cabinet providing an insulated refrigerating compartment and a hollow container presenting an extended surface area but of small cubical content within said compartment, of a portable refrigerating unit arranged to be placed upon said cabinet, said unit having an insulated compartment for the freezing of liquids, a brine tank substantially filling said last-named compartment and providing a chamber for liquids to be frozen, self-contained mechanically operated refrigerating apparatus of the closed cycle type including an evaporator element in thermal contact with said tank to extract heat from the latter, and detachable means for connecting said tank to said container and arranged to effect circulation of the brine by gravity so as to utilize the brine to extract heat from said cabinet compartment, said detachable means permitting the entire removal of said unit or an exchange of units without disturbing the interior of said cabinet.

(To Be Concluded in Next Issue)

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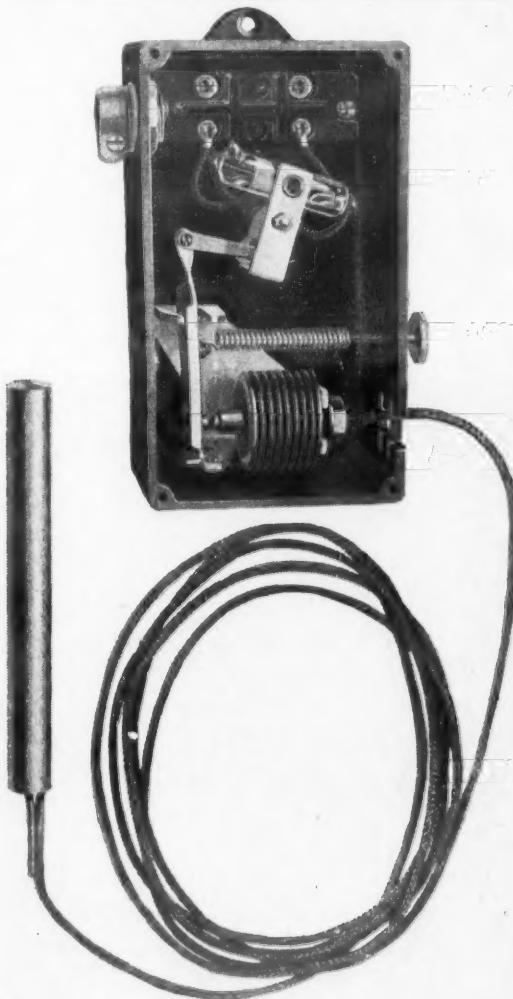
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